GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: July 13, 2004, 16:03:45 ; Search time 50 Seconds
(without alignments)
5215.273 Million cell updates/sec

Title: US-09-297-703C-29
Perfect score: 4545
Sequence: 1 MGHYTISGIRFPCAPLCKSQ.....AVVYALVEDEVENELEPVAG 836

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1279676 seqs, 311918243 residues

Total number of hits satisfying chosen parameters: 1279676

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
10: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	3501.5	77.0	870	12	US-10-424-599-273691	Sequence 273691,
2	3387.5	74.5	878	14	US-10-254-534-2	Sequence 2, Appli
3	3356	73.8	882	14	US-10-056-454A-15	Sequence 15, Appl
4	3315	72.9	841	16	US-10-437-963-154157	Sequence 154157,
5	3261.5	71.8	814	14	US-10-171-008-10	Sequence 10, Appl
6	3176	69.9	825	16	US-10-437-963-114379	Sequence 114379,
7	3170	69.7	855	9	US-09-792-127-4	Sequence 4, Appli
8	3166.5	69.7	798	12	US-10-336-753-70	Sequence 70, Appl
9	3166.5	69.7	870	12	US-10-336-753-54	Sequence 54, Appl
10	3152.5	69.4	829	9	US-09-792-127-5	Sequence 5, Appli
11	3148	69.3	695	9	US-09-792-127-2	Sequence 2, Appli
12	2204	48.5	464	14	US-10-254-534-4	Sequence 4, Appli
13	2124	46.7	776	12	US-10-336-753-56	Sequence 56, Appl
14	2124	46.7	822	14	US-10-171-008-9	Sequence 9, Appli
15	2119	46.6	827	16	US-10-437-963-170346	Sequence 170346,
16	1953	43.0	674	12	US-10-425-114-53683	Sequence 53683, A
17	1939.5	42.7	421	12	US-10-425-114-45676	Sequence 45676, A
18	1885	41.5	681	15	US-10-369-493-5706	Sequence 5706, Ap
19	1863.5	41.0	874	15	US-10-369-493-3969	Sequence 3969, Ap
20	1765.5	38.8	704	15	US-10-369-493-1720	Sequence 1720, Ap
21	1664.5	36.6	546	14	US-10-171-008-8	Sequence 8, Appli
22	1634.5	36.0	647	15	US-10-369-493-10283	Sequence 10283, A
23	1376	30.3	309	14	US-10-171-008-4	Sequence 4, Appli
24	1034.5	22.8	502	16	US-10-437-963-138237	Sequence 138237,
25	822	18.1	337	12	US-10-262-511-108	Sequence 108, App
26	789	17.4	474	16	US-10-437-963-154156	Sequence 154156,
27	740.5	16.3	375	12	US-10-424-599-283934	Sequence 283934,
28	594	13.1	726	15	US-10-369-493-19590	Sequence 19590, A
29	587.5	12.9	756	15	US-10-369-493-20951	Sequence 20951, A
30	587	12.9	750	15	US-10-369-493-19848	Sequence 19848, A
31	587	12.9	770	15	US-10-369-493-2780	Sequence 2780, Ap
32	576	12.7	762	16	US-10-705-195-2	Sequence 2, Appli
33	571.5	12.6	630	15	US-10-369-493-50	Sequence 50, Appl
34	571.5	12.6	728	15	US-10-369-493-23588	Sequence 23588, A
35	571.5	12.6	785	12	US-10-336-753-36	Sequence 36, Appl
36	571	12.6	737	15	US-10-369-493-12299	Sequence 12299, A
37	566.5	12.5	720	15	US-10-369-493-20849	Sequence 20849, A
38	566.5	12.5	735	15	US-10-369-493-19307	Sequence 19307, A
39	566	12.5	617	15	US-10-369-493-9891	Sequence 9891, Ap
40	566	12.5	730	12	US-10-282-122A-58499	Sequence 58499, A
41	556	12.2	159	12	US-10-424-599-230110	Sequence 230110,
42	550.5	12.1	731	9	US-09-738-626-4854	Sequence 4854, Ap
43	550	12.1	705	15	US-10-369-493-632	Sequence 632, App
44	549.5	12.1	719	15	US-10-369-493-10019	Sequence 10019, A
45	544	12.0	628	15	US-10-369-493-9028	Sequence 9028, Ap

ALIGNMENTS

RESULT 1
US-10-424-599-273691
; Sequence 273691, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 273691
; LENGTH: 870
; TYPE: PRT
; ORGANISM: Glycine max
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(870)
; OTHER INFORMATION: unsure at all Xaa locations
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_89164C.1.pep
US-10-424-599-273691

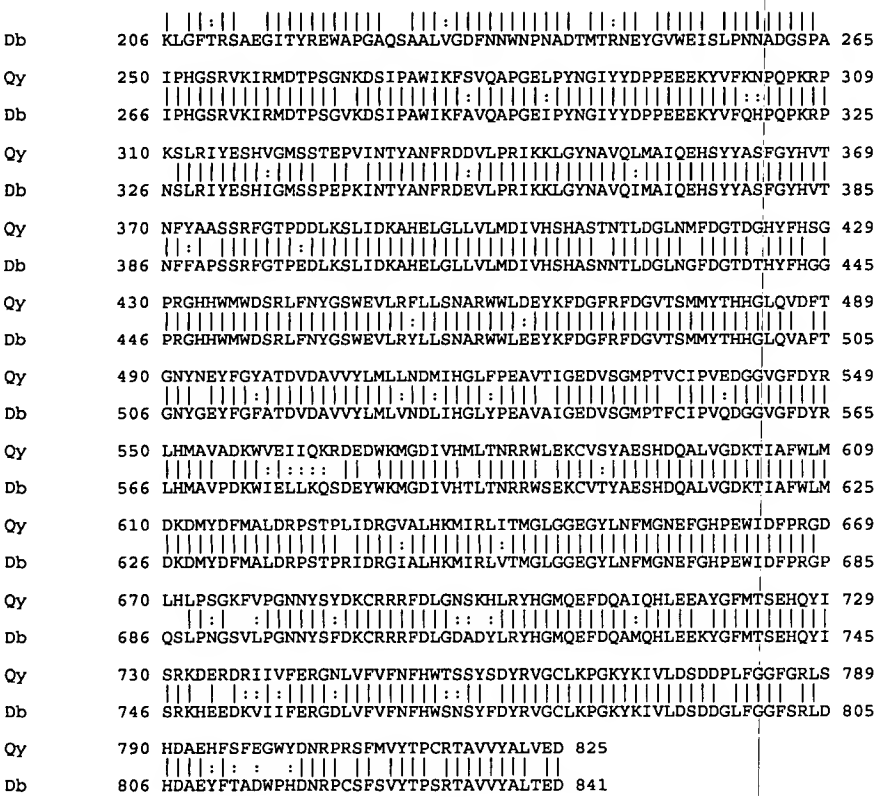
Query Match 77.0%; Score 3501.5; DB 12; Length 870;
Best Local Similarity 75.5%; Pred. No. 0;
Matches 649; Conservative 73; Mismatches 103; Indels 35; Gaps 6;

```
Qy          4 YTISGIRFPCAPLCKSQSTGFHGYRRTSSCLSFNFKEAFSRRVFSGKSSHESDSSNVMVT 63
              |||||||||  |     :: | | |||:|   |    :|||:  : ||||:||| :  :
Db          3 YTISGIRFPVLP--SLHNSRFRGDRRTASLPVFLRNNSFSRKTLALKSSHDSDSLSSAIA 60

Qy         64 ASKRVLPDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDD-------------KIV 110
                | :||     :  :| ||||| |   ||::|   ::| | |:|             : :
Db         61 KSDKVLIPQDQDNSASLTDQLETPDITSEDTQ---NLEDLTMEDEDKYNISEAASSYRHI 117
```

```
Qy        111 ED----------EVN----KESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGF 156
Db        118 EDGQGSVVSSLVDVNIPAKKASVSVGRKSKIVSDEVKPKXIPPPGTGQKIYEIDPSLLAH 177

Qy        157 RQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIG 216
Db        178 RDHLDFRYGQYKRLCYEIDKHEGGLDTFSRGYEKFGFIRSATGITYREWAPGAKSAALIG 237

Qy        217 DFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKF 276
Db        238 DFNNWNPNADVMTRNEFGVWEIFLPNNVDGSPPIPHGSRVKIRMDTPSGIKDSIPAWIKF 297

Qy        277 SVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRD 336
Db        298 SVQAPGEIPYSGIYYDPPEEEKYVFKHPQPKRPKSLRIYESHIGMSSPEPKINTYVNFRD 357

Qy        337 DVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGL 396
Db        358 DVLPRIKRLGYNAVQIMAIQEHSYYASFGYHVTNFFAPSSRFGTPEELKSLIDRAHELGL 417

Qy        397 LVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSN 456
Db        418 LVLMDIVHSHASNNTLDGLNMFDGTEGHYFHPGSRGYHWMWDSRLFNYGSWEVLRYLLSN 477

Qy        457 ARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIH 516
Db        478 ARWWLDEYKFDGFRFDGVTSMMYTHHGLEVAFTGNYNEYFGFATDVDAVIYLMLTNDVIH 537

Qy        517 GLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVH 576
Db        538 GLFPEAVTIGEDVSGMPTFCLPTQDGGVGFDYRLHMAIADKWIEILKKNDEDWKMGDIVH 597

Qy        577 MLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKM 636
Db        598 TLTNRRWLEKCVAYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPIIDRGIALHKM 657

Qy        637 IRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGN 696
Db        658 IRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDQHLPTGVIVPGNNNSFDKCRRRFDLGD 717

Qy        697 SKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTS 756
Db        718 ADYLRYRGMQEFDQAMQHLEEKFGFMTAEHQYISRKNEGDKIIVFERGNLIFVFNFHWNN 777

Qy        757 SYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRT 816
Db        778 SYSDYRVGCSTPGKYKIVLDSDDALFGGFSRLNHTAEYFTSEGWYDDRPRSFLIYAPSRT 837

Qy        817 AVVYAL---VEDEVENELEP 833
Db        838 AVVYALADDVEPTLADEAEP 857
```

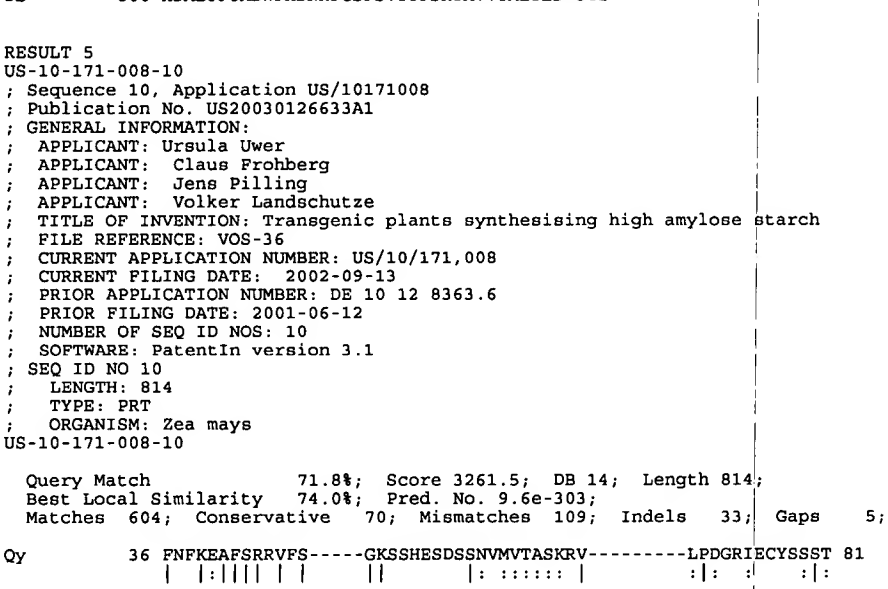
```
RESULT 2
US-10-254-534-2
; Sequence 2, Application US/10254534
; Publication No. US20030046730A1
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/10/254,534
;  CURRENT FILING DATE:  2002-09-26
;  PRIOR APPLICATION NUMBER: US/09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
;  LENGTH: 878
;  TYPE: PRT
;  ORGANISM: Unknown
;  FEATURE:
;  OTHER INFORMATION: Description of Unknown Organism:beII gene (branching enzyme II) f
US-10-254-534-2

  Query Match             74.5%;  Score 3387.5;  DB 14;  Length 878;
  Best Local Similarity   71.9%;  Pred. No. 9.1e-315;
  Matches  621;  Conservative   92;  Mismatches  116;  Indels   35;  Gaps    5;

Qy          4 YTISGIRFPCAP-LCKSQSTGFHGYRRTSSCLSFNFKEAFSRRVFSGKSSHESDSSNVMV 62
Db          3 YTLSGVRFPTVPSVYKSNGFSSNGDRRNANXSVFLKKHSLSRKILAEKSSYNSESRPSTV 62

Qy         63 TASKRVL-PDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDD----KIVEDEV--- 114
Db         63 AASGKVLVPGTQSDSSSSSTDQFEFTETSPENSPASTDVDSSTMEHARQIKTENDDVEPS 122

Qy        115 -----NKESVPMRETVSIRKIGS--------------------KPRSIPPPGRGQRIYD 148
Db        123 SDLTGSVEELDFASSLQLQEGGKLEESKTLNTSEETIIDESDRIRERGIPPPGLGQKIYE 182

Qy        149 IDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPG 208
Db        183 IDPLLTNYRQHLDYRYSQYKKLREAIDKYEGGLEAFSRGYEKMGFTRSATGITYREWAPG 242

Qy        209 ATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
Db        243 AQSAALIGDFNNWDANADIMTRNEFGVWEIFLPNNVDGSPAIPHGSRVKIRMDTPSGVKD 302

Qy        269 SIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVI 328
Db        303 SIPAWINYSLQLPDEIPYNGIYYDPPEEERYIFQHPRPKKPKSLRIYESHIGMSSPEPKI 362

Qy        329 NTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLI 388
Db        363 NSYVNFRDEVLPRIKKLGYNAVQIMAIQEHSYYASFGYHVTNFXAPSSRFGXPDDLKSLI 422

Qy        389 DKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWE 448
Db        423 DKAHELGIVVLMDIVHSHASNNTLDGLNMFDGTDSCYFHSGARGYHWMWDSRLFNYGNWE 482

Qy        449 VLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYL 508
Db        483 VLRYLLSNARWWLDEFKFDGFRFDGVTSMMYTHHGLSVGFTGNYEEYFGLATDVDAVVYL 542

Qy        509 MLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDED 568
Db        543 MLVNDLIHGLFPDAITIGEDVSGMPTFXIPVQDGGVGFDYRLHMAIADKWIELLKKRDED 602

Qy        569 WKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLID 628
Db        603 WRVGDIVHTLTNRRWSEKCVSYAESHDQALVGDKTIAFWLMEKDMYDFMALDRXSTSLID 662

Qy        629 RGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKC 688
Db        663 RGIALHKMIRLVTMGLGGEGYLNFMGNEFGHPEWIDFPRAEQHLSDGSVIPGNQFSYDKC 722

Qy        689 RRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVF 748
Db        723 RRRFDLGDAEYLRYRGLQEFDRAMQYLEDKYEFMTSEHQFISRKDEGDRMIVFEKGNLVF 782

Qy        749 VFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSF 808
Db        783 VFNFHWTKSYSDYRIGCLKPGKYKVALDSDDPLFGGFGRIDHNAEYFTFEGWYDDRPRSI 842
```

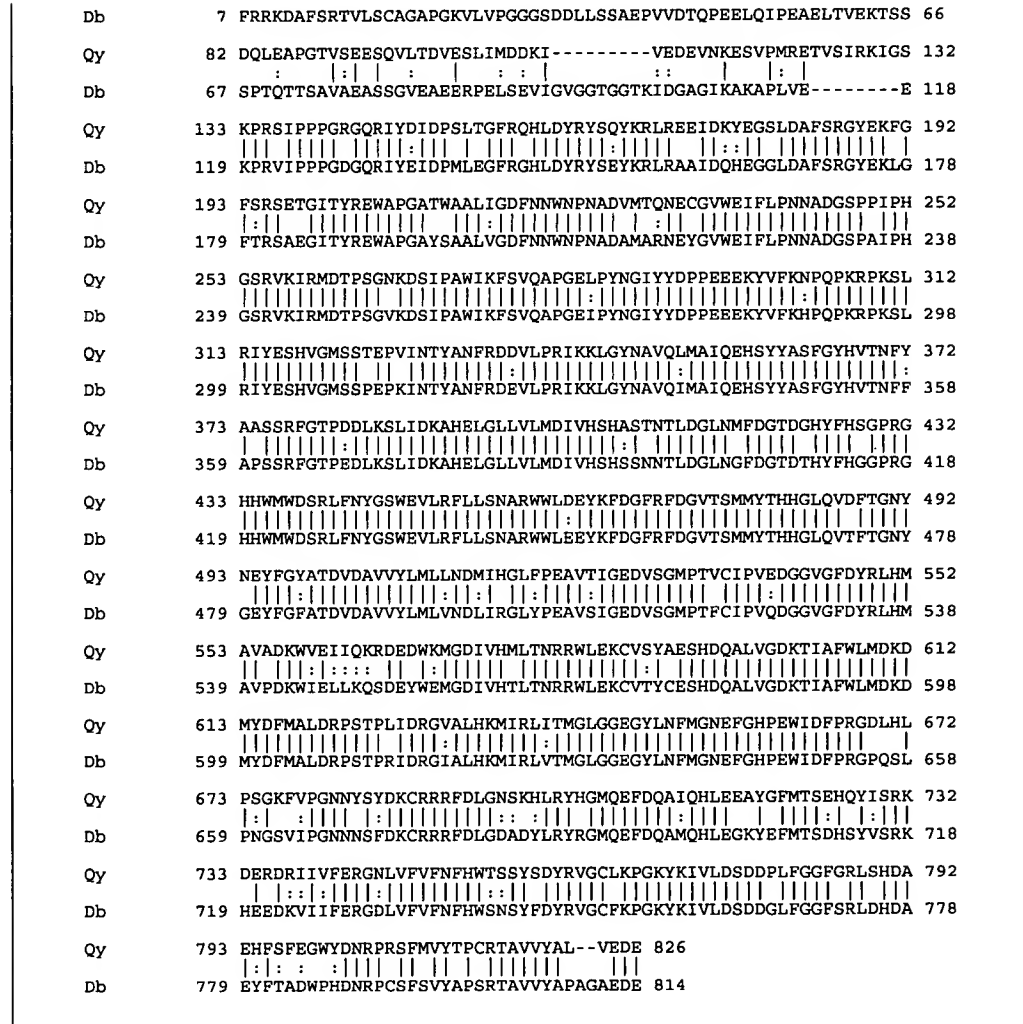
```
Qy        809 MVYTPCRTAVVYALVEDEVENELE 832
              ||| | |||||||||: | | | |
Db        843 MVYAPSRTAVVYALVDKEEEEEEE 866


RESULT 3
US-10-056-454A-15
; Sequence 15, Application US/10056454A
; Publication No. US20030166919A1
;  GENERAL INFORMATION:
;       APPLICANT: National Starch and Chemical Investment Holding Corporation
;       TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
;       NUMBER OF SEQUENCES: 20
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: National Starch and Chemical Investment Holding Corporation
;            STREET: 1000 Uniqema Blvd.
;            CITY: Newcastle
;            STATE: Delaware
;            COUNTRY: United States of America
;            ZIP: 19720
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/10/056,454A
;            FILING DATE: 25-Jun-2002
;  INFORMATION FOR SEQ ID NO: 15:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 882 amino acids
;            TYPE: amino acid
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 15:
US-10-056-454A-15

  Query Match             73.8%;  Score 3356;  DB 14;  Length 882;
  Best Local Similarity   70.9%;  Pred. No. 9.6e-312;
  Matches  617;  Conservative   96;  Mismatches  119;  Indels   38;  Gaps    6;

Qy          4 YTISGIRFPCAP-LCKSQSTGFHGYRRTSSCLSFNFKEAFSRRVFSGKSSHESDSSNVMV 62
              ||:||:|||  | : ||     :| || ::   |  | : ||:: : |||: |:     |
Db          3 YTLSGVRFPTVPSVYKSNGFSSNGDRRNANVSVFLKKHSLSRKILAEKSSYNSEFRPSTV 62

Qy         63 TASKRVL-PDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDD----KIVEDEV--- 114
               || :|| |  : :  |||||| |    |  | |   |||:|  |:     |   |:|
Db         63 AASGKVLVPGTQSDSSSSSTDQFEFTETSPENSPASTDVDSSTMEHASQIKTENDDVEPS 122

Qy        115 -----NKESVPMRETVSIRKIGS--------------------KPRSIPPPGRGQRIYD 148
                  : | :    :: ::: |                      : | ||||| ||:||:
Db        123 SDLTGSVEELDFASSLQLQEGGKLEESKTLNTSEETIIDESDRIRERGIPPPGLGQKIYE 182

Qy        149 IDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPG 208
              ||| || :|||||||||||:||| |||||| |:|||||||| ||:|| |||||||| |
Db        183 IDPLLTNYRQHLDYRYSQYKKLREAIDKYEGGLEAFSRGYEKMGFTRSATGITYREWALG 242

Qy        209 ATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
              |  ||||||||||: |||:||:|| |||||||||| |||| |||||||||||||| ||
Db        243 AQSAALIGDFNNWDANADIMTRNEFGVWEIFLPNNVDGSPAIPHGSRVKIRMDTPSGVKD 302

Qy        269 SIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVI 328
              |||||| :|:| | |:|||||:|||||||:|:|::|:||:||||||||||:|||| || |
Db        303 SIPAWINYSLQLPDEIPYNGIHYDPPEEERYIFQHPRPKKPKSLRIYESHIGMSSPEPKI 362

Qy        329 NTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLI 388
              |:| ||||:||||||||||||:|:|||||||||||||||||:| ||||||||||||||
Db        363 NSYVNFRDEVLPRIKKLGYNALQIMAIQEHSYYASFGYHVTNFFAPSSRFGTPDDLKSLI 422

Qy        389 DKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWE 448
              |||||||::|||||||||| |||||||||| ||  |||||||:|||||||||||||:||
Db        423 DKAHELGIVVLMDIVHSHASNNTLDGLNMFDCTDSCYFHSGARGYHWMWDSRLFNYGNWE 482

Qy        449 VLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYL 508
              |||:|||||||||| :|||||||||||||| |||| | ||||| |||| ||||||||||
Db        483 VLRYLLSNARWWLDAFKFDGFRFDGVTSMMYIHHGLSVGFTGNYEEYFGLATDVDAVVYL 542

Qy        509 MLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDED 568
              ||:||:||||||:|:|||||||||| ||||::|||||||||||||:||| :|:::|||||
Db        543 MLVNDLIHGLFPDAITIGEDVSGMPTFCIPVQEGGVGFDYRLHMAIADKRIELLKKRDED 602

Qy        569 WKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLID 628
              |::||||| |||||| ||||||||||||||||||||||||||||||||||||||||| |||
Db        603 WRVGDIVHTLTNRRWSEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTSLID 662

Qy        629 RGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKC 688
              ||:|||||||:|||||||||||||||||||||||||||||| : ||  |  :||| :|||||
Db        663 RGIALHKMIRLVTMGLGGEGYLNFMGNEFGHPEWIDFPRAEQHLSDGSVIPGNQFSYDKC 722

Qy        689 RRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVF 748
              |||||||::::||| |:|||: :|:||: | |||||||:|||||| ||:||||:|||||
Db        723 RRRFDLGDAEYLRYRGLQEFDRPMQYLEDKYEFMTSEHQFISRKDEGDRMIVFEKGNLVF 782

Qy        749 VFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSF 808
              ||||||| |||||||: ||||||||: |||||||||||||: |:||:|:||||||:||||
Db        783 VFNFHWTKSYSDYRIACLKPGKYKVALDSDDPLFGGFGRIDHNAEYFTFEGWYDDRPRSI 842

Qy        809 MVYTPCRTAVVYALV---EDEVENELEPVA 835
              ||| ||:|||||||   |:| | | | ||
Db        843 MVYAPCKTAVVYALVDKEEEEEEEEEEEVA 872


RESULT 4
US-10-437-963-154157
; Sequence 154157, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
;  APPLICANT: La Rosa, Thomas J.
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Cao, Yongwei
;  APPLICANT:  Wu, Wei
;  APPLICANT:  Boukharov, Andrey A.
;  APPLICANT:  Barbazuk, Brad
;  APPLICANT:  Li, Ping
;  TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof for Plant Improvement
;  FILE REFERENCE: 38-21(53221)B
;  CURRENT APPLICATION NUMBER: US/10/437,963
;  CURRENT FILING DATE:  2003-05-14
;  NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 154157
;   LENGTH: 841
;   TYPE: PRT
;   ORGANISM: Oryza sativa
;   FEATURE:
;   OTHER INFORMATION: Clone ID: PAT_MRT4530_54044C.1.pep
US-10-437-963-154157

  Query Match             72.9%;  Score 3315;  DB 16;  Length 841;
  Best Local Similarity   74.9%;  Pred. No. 7.6e-308;
  Matches  611;  Conservative   66;  Mismatches   99;  Indels   40;  Gaps    6;

Qy         36 FNFKEAFSRRVFS-----GK-----------SSHESDSSNVMVTASKRVLPDGRIECYS 78
              |  |::||| | |     ||           || | |           ::  | ::: :
Db         40 FRRKDSFSRGVVSCAGAPGKVLVPGGGSDDLLSSAEPDVETQEQPEESQIPDDNKVKPFE 99

Qy         79 SSTDQLEAPGTVS---------EESQVLTDVESLIMDDKIVEDEVNKESVPMRETVSIRK 129
                 ::: |    |          | |:|: |:|     : : |  :     |  |
Db        100 EE-EEIPAVAEASIKVVAEDKLESSEVIQDIE-----ENVTEGVIKDADEPTVE------ 147

Qy        130 IGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYE 189
                 ||| ||||| ||:|| ||| | ||| |||||||:|||:|  ||::|| |||||||||
Db        148 --DKPRVIPPPGDGQKIYQIDPMLEGFRNHLDYRYSEYKRMRAAIDQHEGGLDAFSRGYE 205

Qy        190 KFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPP 249
```



RESULT 5
US-10-171-008-10
; Sequence 10, Application US/10171008
; Publication No. US20030126633A1
; GENERAL INFORMATION:
; APPLICANT: Ursula Uwer
; APPLICANT: Claus Frohberg
; APPLICANT: Jens Pilling
; APPLICANT: Volker Landschutze
; TITLE OF INVENTION: Transgenic plants synthesising high amylose starch
; FILE REFERENCE: VOS-36
; CURRENT APPLICATION NUMBER: US/10/171,008
; CURRENT FILING DATE: 2002-09-13
; PRIOR APPLICATION NUMBER: DE 10 12 8363.6
; PRIOR FILING DATE: 2001-06-12
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 10
; LENGTH: 814
; TYPE: PRT
; ORGANISM: Zea mays
US-10-171-008-10

Query Match 71.8%; Score 3261.5; DB 14; Length 814;
Best Local Similarity 74.0%; Pred. No. 9.6e-303;
Matches 604; Conservative 70; Mismatches 109; Indels 33; Gaps 5;





RESULT 6
US-10-437-963-114379
; Sequence 114379, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; APPLICANT: Wu, Wei
; APPLICANT: Boukharov, Andrey A.
; APPLICANT: Barbazuk, Brad
; APPLICANT: Li, Ping
; TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53221)B
; CURRENT APPLICATION NUMBER: US/10/437,963
; CURRENT FILING DATE: 2003-05-14

```
;  NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 114379
;   LENGTH: 825
;   TYPE: PRT
;   ORGANISM: Oryza sativa
;   FEATURE:
;   OTHER INFORMATION: Clone ID: PAT_MRT4530_18076C.1.pep
US-10-437-963-114379

  Query Match             69.9%;  Score 3176;  DB 16;  Length 825;
  Best Local Similarity   70.3%;  Pred. No. 1.5e-294;
  Matches  586;  Conservative   86;  Mismatches  117;  Indels   44;  Gaps    7;

Qy          9 IRFPCAPLCKSQSTGFHGYRRTSSCLSFNFKEAFSRRVFSGKSSHESDSSNVMVTAS--- 65
              :|||          |   :|  :   :   :   | | | |          | | |:
Db         20 VRFPV-------PAGARSWRAAAELPT--SRSLLSGRRFPGAVRVGGSGGRVAVRAAGAS 70

Qy         66 -KRVLPDGRIE--CYSSSTDQLEAPGTVSE----------ESQVLTDVESLIMDDKIVE 111
               : ::|:|  :    |: :| |: |    |          ||   :||| :    | |
Db         71 GEVMIPEGESDGMPVSAGSDDLQLPALDDELSTEVGAEVEIESSGASDVEGV----KRVV 126

Qy        112 DEVNKESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLR 171
              :|:  |               ||| :|| | ||:|: :|  | |:: ||:|||| |:||
Db        127 EELAAE-------------QKPRVVPPTGDGQKIFQMDSMLNGYKYHLEYRYSLYRRLR 172

Qy        172 EEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQN 231
              :||:||| |: ||||||||||: |  |:||||||||  |||:||||||||||| |::|
Db        173 SDIDQYEGGLETFSRGYEKFGFNHSAEGVTYREWAPGAHSAALVGDFNNWNPNADRMSKN 232

Qy        232 ECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYY 291
              | |||||||||||||| |||||||||:||:|||| |||||||||:|||| ||:|||||||
Db        233 EFGVWEIFLPNNADGSSPIPHGSRVKVRMETPSGIKDSIPAWIKYSVQAAGEIPYNGIYY 292

Qy        292 DPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQ 351
              ||||||||:||:|||||||||||:|||||||| |||||||||:|||||||||||||||||
Db        293 DPPEEEKYIFKHPQPKRPKSLRIYETHVGMSSTEPKINTYANFRDEVLPRIKKLGYNAVQ 352

Qy        352 LMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNT 411
              :|||||:|| |||||||||:| |||||||:|||||||||||||||:||||:|||||| ||
Db        353 IMAIQEHAYYGSFGYHVTNFFAPSSRFGTPEDLKSLIDKAHELGLVVLMDVVHSHASNNT 412

Qy        412 LDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRF 471
              ||||| ||||| |||||| ||||||||||||||:||||||||||||||:|||||||||
Db        413 LDGLNGFDGTDTHYFHSGSRGHHWMWDSRLFNYGNWEVLRFLLSNARWWLEEYKFDGFRF 472

Qy        472 DGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSG 531
              |||||||||||||| |||||:||||:||| ||||||||:||:||||:|||| |||||||
Db        473 DGVTSMMYTHHGLQVAFTGNYSEYFGFATDADAVVYLMLVNDLIHGLYPEAVAIGEDVSG 532

Qy        532 MPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYA 591
              |||  :||:|||||||||||||| |||:|:::: || |||||||| |||||| ||||:||
Db        533 MPTFALPVQDGGVGFDYRLHMAVPDKWIELLKQSDESWKMGDIVHTLTNRRWSEKCVTYA 592

Qy        592 ESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLN 651
              |||||||||||||||||||||||||||||:|| ||||:|||||||||||||||||||||||
Db        593 ESHDQALVGDKTIAFWLMDKDMYDFMALDRPATPSIDRGIALHKMIRLITMGLGGEGYLN 652

Qy        652 FMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQA 711
              |||||||||||||||    ||:|||:|||| ||||||||||:: :||| || |||:|
Db        653 FMGNEFGHPEWIDFPRAPQVLPNGKFIPGNNNSYDKCRRRFDLGDADYLRYRGMLEFDRA 712

Qy        712 IQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKY 771
              :| ||| |||||:|||||| | |::|:||:|:|||||||::|| ||||||||||||
Db        713 MQSLEEKYGFMTSDHQYISRKHEEDKMIIFEKGDLVFVFNFHWSNSYFDYRVGCLKPGKY 772

Qy        772 KIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYALVE 824
              |:|||||  |||||||: | ||||: :  :|||| || ||:| || ||||  |
Db        773 KVVLDSDAGLFGGFGRIHHTAEHFTADCSHDNRPYSFSVYSPSRTCVVYAPAE 825


RESULT 7
US-09-792-127-4
; Sequence 4, Application US/09792127
; Patent No. US20020002713A1
; GENERAL INFORMATION:
;  APPLICANT:  Allen, Steve
;  APPLICANT:  Beckles, Diane M.
;  APPLICANT:  Butler, Karla
;  APPLICANT:  Pearlstein, Rich
;  TITLE OF INVENTION:  Starch Branching Enzyme IIb
;  FILE REFERENCE:  BB1439 US NA
;  CURRENT APPLICATION NUMBER: US/09/792,127
;  CURRENT FILING DATE:  2001-02-23
;  PRIOR APPLICATION NUMBER:  60/186098
;  PRIOR FILING DATE:  2000-03-01
;  NUMBER OF SEQ ID NOS:  5
;  SOFTWARE:  Microsoft Office 97
; SEQ ID NO 4
;   LENGTH: 855
;   TYPE: PRT
;   ORGANISM: Triticum aestivum
US-09-792-127-4

  Query Match             69.7%;  Score 3170;  DB 9;  Length 855;
  Best Local Similarity   70.9%;  Pred. No. 6.1e-294;
  Matches  592;  Conservative   81;  Mismatches  130;  Indels   32;  Gaps    8;

Qy          7 SGIRFPCAPLCKSQSTGFHGYRRTSSCLSF--NFKEAFSRRVFSGKSSHE------SDSS 58
              :|:  | ||           |   | | |  |    | |  | |            |
Db         30 AGLARPSAPRSGGAERRGRGVELQSPSLLFGRNKGTRSPRAVGVGGSGWRVVMRAGGPSG 89

Qy         59 NVMVTASKRVLPDGRIECYSSSTDQLEAPGTVSEESQVL----TDVESLIMD---DKIVE 111
               ||:       |||       | |     | |  :|  |     | |: : |   | |
Db         90 EVMI-------PDGGSGGTPPSID-----GPVQFDSDDLKVPFIDDETSLQDGGEDSIWS 137

Qy        112 DEVNK--ESVPMRETVSIRKIGS---KPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQ 166
               | |:  | :   :|  : |   |    | | :|||| ||:||:|||:|  |: ||:|||
Db        138 SETNQVSEEIDAEDTSRMDKESSTREKLRILPPPGNGQQIYEIDPTLRDFKYHLEYRYSL 197

Qy        167 YKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNAD 226
              |:|:| :||::|| :| |||||||||| ||  |||||||||||  |||:||||||:||||
Db        198 YRRIRSDIDEHEGGMDVFSRGYEKFGFMRSAEGITYREWAPGADSAALVGDFNNWDPNAD 257

Qy        227 VMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPY 286
              |::|: |||||||||||||||||||||||:||||||| |||||||||:||| ||::||
Db        258 HMSKNDLGVWEIFLPNNADGSPPIPHGSRVKVRMDTPSGIKDSIPAWIKYSVQTPGDIPY 317

Qy        287 NGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLG 346
              ||||||||||||||:|||||||||||||:|||||| || ||||||||||:||||||:||
Db        318 NGIYYDPPEEEKYVFKHPQPKRPKSLRIYETHVGMSSPEPKINTYANFRDEVLPRIKRLG 377

Qy        347 YNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSH 406
              |||||:|||||||| |||||||||:| |||||:|:|||||||:|||||:||||:||||
Db        378 YNAVQIMAIQEHSYYGSFGYHVTNFFAPSSRFGSPEDLKSLIDRAHELGLVVLMDVVHSH 437

Qy        407 ASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKF 466
              || ||||||| ||||| |||| | |||||||||||:||||: ||:|||||||||||:||||
Db        438 ASNNTLDGLNGFDGTDTHYFHGGSRGHHWMWDSRVFNYGNKEVIRFLLSNARWWLEEYKF 497

Qy        467 DGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIG 526
              ||||||| |||||||||||| |||:|:||||:||||||||||||:||:||| :||||||
Db        498 DGFRFDGATSMMYTHHGLQVTFTGSYHEYFGFATDVDAVVYLMLMNDLIHGFYPEAVTIG 557

Qy        527 EDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEK 586
              |||||||  :||: |||||||||||||||:|:::  || |:||:||| |||||||||
Db        558 EDVSGMPTFALPVQVGGVGFDYRLHMAVADKWIELLKGNDEAWEMGNIVHTLTNRRWLEK 617

Qy        587 CVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGG 646
              ||:|||||||||||||||||||||||||||||: |||| ||||:|||||||||||||||
Db        618 CVTYAESHDQALVGDKTIAFWLMDKDMYDFMALNGPSTPNIDRGIALHKMIRLITMGLGG 677

Qy        647 EGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQ 706
              |||||||||||||||||||    ||||||:|||| ||||||||||||::: ||||||||
Db        678 EGYLNFMGNEFGHPEWIDFPRGPQVLPSGKFIPGNNNSYDKCRRRFDLGDAEFLRYHGMQ 737

Qy        707 EFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCL 766
```

```
Db        738 QFDQAMQHLEEKYGFMTSDHQYVSRKHEEDKVIVFEKGDLVFVFNFHWSSSYFDYRVGCL 797

Qy        767 KPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYA 821

Db        798 KPGKYKVVLDSDAGLFGGFGRIHHTAEHVTSDCQHDNRPHSFSVYTPSRTCVVYA 852


RESULT 8
US-10-336-753-70
; Sequence 70, Application US/10336753
; Publication No. US20030226176A1
; GENERAL INFORMATION:
;  APPLICANT: Guan, Hanping
;  APPLICANT:  Keeling, Peter L.
;  TITLE OF INVENTION: PLANT LIKE STARCHES AND THE METHOD OF MAKING THEM IN
;  TITLE OF INVENTION:  HOSTS
;  FILE REFERENCE: 2461-52
;  CURRENT APPLICATION NUMBER: US/10/336,753
;  CURRENT FILING DATE:  2003-01-06
;  PRIOR APPLICATION NUMBER: US/09/402,254
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/US98/06660
;  PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
;  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/042,939
;  PRIOR FILING DATE: EARLIER FILING DATE: 1997-04-04
;  NUMBER OF SEQ ID NOS: 77
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 70
;   LENGTH: 798
;   TYPE: PRT
;   ORGANISM: Zea mays
US-10-336-753-70

  Query Match             69.7%;  Score 3166.5;  DB 12;  Length 798;
  Best Local Similarity   74.2%;  Pred. No. 1.2e-293;
  Matches  572;  Conservative   80;  Mismatches   80;  Indels   39;  Gaps    4;

Qy         64 ASKRVLPDG-------RIECYSSSTDQLEAPGTVSEESQV---LTDVESLIMDDKIVEDE 113

Db         57 ARKAMVPEGENDGLASRADSAQFQSDELEVP-DISEETTCGAGVADAQAL---------- 105

Qy        114 VNKESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREE 173

Db        106 ------------------NRVRVVPPPSDGQKIFQIDPMLQGYKYHLEYRYSLYRRIRSD 147

Qy        174 IDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNEC 233

Db        148 IDEHEGGLEAFSRSYEKFGFNASAEGITYREWAPGAFSAALVGDVNNWDPNADRMSKNEF 207

Qy        234 GVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDP 293

Db        208 GVWEIFLPNNADGTSPIPHGSRVKVRMDTPSGIKDSIPAWIKYSVQAPGEIPYDGIYYDP 267

Qy        294 PEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLM 353

Db        268 PEEVKYVFRHAQPKRPKSLRIYETHVGMSSPEPKINTYVNFRDEVLPRIKKLGYNAVQIM 327

Qy        354 AIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLD 413

Db        328 AIQEHSYYGSFGYHVTNFFAPSSRFGTPEDLKSLIDRAHELGLLVLMDVVHSHASSNTLD 387

Qy        414 GLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDG 473

Db        388 GLNGFDGTDTHYFHSGPRGHHWMWDSRLFNYGNWEVLRFLLSNARWWLEEYKFDGFRFDG 447

Qy        474 VTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMP 533

Db        448 VTSMMYTHHGLQVTFTGNFNEYFGFATDVDAVVYLMLVNDLIHGLYPEAVTIGEDVSGMP 507

Qy        534 TVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAES 593

Db        508 TFALPVHDGGVGFDYRMHMAVADKWIDLLKQSDETWKMGDIVHTLTNRRWLEKCVTYAES 567

Qy        594 HDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFM 653

Db        568 HDQALVGDKTIAFWLMDKDMYDFMALDRPSTPTIDRGIALHKMIRLITMGLGGEGYLNFM 627

Qy        654 GNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQ 713

Db        628 GNEFGHPEWIDFPRGPQRLPSGKFIPGNNNSYDKCRRRFDLGDADYLRYHGMQEFDQAMQ 687

Qy        714 HLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKI 773

Db        688 HLEQKYEFMTSDHQYISRKHEEDKVIVFEKGDLVFVFNFHCNNSYFDYRIGCRKPGVYKV 747

Qy        774 VLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYALVE 824

Db        748 VLDSDAGLFGGFSRIHHAAEHFTADCSHDNRPYSFSVYTPSRTCVVYAPVE 798


RESULT 9
US-10-336-753-54
; Sequence 54, Application US/10336753
; Publication No. US20030226176A1
; GENERAL INFORMATION:
;  APPLICANT: Guan, Hanping
;  APPLICANT:  Keeling, Peter L.
;  TITLE OF INVENTION: PLANT LIKE STARCHES AND THE METHOD OF MAKING THEM IN
;  TITLE OF INVENTION:  HOSTS
;  FILE REFERENCE: 2461-52
;  CURRENT APPLICATION NUMBER: US/10/336,753
;  CURRENT FILING DATE:  2003-01-06
;  PRIOR APPLICATION NUMBER: US/09/402,254
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/US98/06660
;  PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
;  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/042,939
;  PRIOR FILING DATE: EARLIER FILING DATE: 1997-04-04
;  NUMBER OF SEQ ID NOS: 77
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 54
;   LENGTH: 870
;   TYPE: PRT
;   ORGANISM: Zea mays
US-10-336-753-54

  Query Match             69.7%;  Score 3166.5;  DB 12;  Length 870;
  Best Local Similarity   74.2%;  Pred. No. 1.4e-293;
  Matches  572;  Conservative   80;  Mismatches   80;  Indels   39;  Gaps    4;

Qy         64 ASKRVLPDG-------RIECYSSSTDQLEAPGTVSEESQV---LTDVESLIMDDKIVEDE 113

Db         57 ARKAMVPEGENDGLASRADSAQFQSDELEVP-DISEETTCGAGVADAQAL---------- 105

Qy        114 VNKESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREE 173

Db        106 ------------------NRVRVVPPPSDGQKIFQIDPMLQGYKYHLEYRYSLYRRIRSD 147

Qy        174 IDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNEC 233

Db        148 IDEHEGGLEAFSRSYEKFGFNASAEGITYREWAPGAFSAALVGDVNNWDPNADRMSKNEF 207

Qy        234 GVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDP 293

Db        208 GVWEIFLPNNADGTSPIPHGSRVKVRMDTPSGIKDSIPAWIKYSVQAPGEIPYDGIYYDP 267

Qy        294 PEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLM 353

Db        268 PEEVKYVFRHAQPKRPKSLRIYETHVGMSSPEPKINTYVNFRDEVLPRIKKLGYNAVQIM 327

Qy        354 AIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLD 413

Db        328 AIQEHSYYGSFGYHVTNFFAPSSRFGTPEDLKSLIDRAHELGLLVLMDVVHSHASSNTLD 387

Qy        414 GLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDG 473
```

```
Db        388 GLNGFDGTDTHYFHSGPRGHHWMWDSRLFNYGNWEVLRFLLSNARWWLEEYKFDGFRFDG 447

Qy        474 VTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMP 533

Db        448 VTSMMYTHHGLQVTFTGNFNEYFGFATDVDAVVYLMLVNDLIHGLYPEAVTIGEDVSGMP 507

Qy        534 TVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAES 593

Db        508 TFALPVHDGGVGFDYRMHMAVADKWIDLLKQSDETWKMGDIVHTLTNRRWLEKCVTYAES 567

Qy        594 HDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFM 653

Db        568 HDQALVGDKTIAFWLMDKDMYDFMALDRPSTPTIDRGIALHKMIRLITMGLGGEGYLNFM 627

Qy        654 GNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQ 713

Db        628 GNEFGHPEWIDFPRGPQRLPSGKFIPGNNNSYDKCRRRFDLGDADYLRYHGMQEFDQAMQ 687

Qy        714 HLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKI 773

Db        688 HLEQKYEFMTSDHQYISRKHEEDKVIVFEKGDLVFVFNFHCNNSYFDYRIGCRKPGVYKV 747

Qy        774 VLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYALVE 824

Db        748 VLDSDAGLFGGFSRIHHAAEHFTADCSHDNRPYSFSVYTPSRTCVVYAPVE 798


RESULT 10
US-09-792-127-5
; Sequence 5, Application US/09792127
; Patent No. US20020002713A1
; GENERAL INFORMATION:
;  APPLICANT:  Allen, Steve
;  APPLICANT:  Beckles, Diane M.
;  APPLICANT:  Butler, Karla
;  APPLICANT:  Pearlstein, Rich
;  TITLE OF INVENTION:  Starch Branching Enzyme IIb
;  FILE REFERENCE:  BB1439 US NA
;  CURRENT APPLICATION NUMBER: US/09/792,127
;  CURRENT FILING DATE:  2001-02-23
;  PRIOR APPLICATION NUMBER:  60/186098
;  PRIOR FILING DATE:  2000-03-01
;  NUMBER OF SEQ ID NOS:  5
;  SOFTWARE:  Microsoft Office 97
; SEQ ID NO 5
;   LENGTH: 829
;   TYPE: PRT
;   ORGANISM: Hordeum vulgare
US-09-792-127-5

  Query Match             69.4%;  Score 3152.5;  DB 9;  Length 829;
  Best Local Similarity   74.2%;  Pred. No. 2.8e-292;
  Matches  570;  Conservative   86;  Mismatches   93;  Indels   19;  Gaps    6;

Qy         68 VLPDG---------RIE-CYSSSTDQLEAPGTVSEESQVLTDVESLIMDDKI--VEDEVN 115

Db         64 MIPDGGSGGGSGTPPSIEGSVQFESDDLEVP-FIDDEPSLHDGGEDTIRSSETYQVTEEID 122

Qy        116 KESVPM--RETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREE 173

Db        123 AEGVSRMDKESSTVKKI----RIVPQPGNGQQIYDIDPMLRDFKYHLEYRYSLYRRIRSD 178

Qy        174 IDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNEC 233

Db        179 IDEYDGGMDVFSRGYEKFGFVRSAEGITYREWAPGADSAALVGDFNNWDPTADHMSKNDL 238

Qy        234 GVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDP 293

Db        239 GIWEIFLPNNADGSPPIPHGSRVKVRMDTPSGTKDSIPAWIKYSVQTPGDIPYNGIYYDP 298

Qy        294 PEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLM 353

Db        299 PEEEKYVFKHPQPKRPKSLRIYETHVGMSSPEPKINTYANFRDEVLPRIKRLGYNAVQIM 358

Qy        354 AIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLD 413

Db        359 AIQEHSYYGSFGYHVTNFFAPSSRFGSPEDLKSLIDRAHELGLLVLMDVVHSHASSNTLD 418

Qy        414 GLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDG 473

Db        419 GLNGFDGTDTHYFHGGSRGHHWMWDSRVFNYGNKEVIRFLLSNARWWLEEYKFDGFRFDG 478

Qy        474 VTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMP 533

Db        479 ATSMMYTHHGLQVTFTGSYHEYFGFATDVDAVVYLMLVNDLIHALYPEAVTIGEDVSGMP 538

Qy        534 TVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAES 593

Db        539 TFALPVQVGGVGFDYRLHMAVADKWIELLKGSDEGWEMGNIVHTLTNRRWLEKCVTYAES 598

Qy        594 HDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFM 653

Db        599 HDQALVGDKTIAFWLMDKDMYDFMALNGPSTPNIDRGIALHKMIRLITMALGGEGYLNFM 658

Qy        654 GNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQ 713

Db        659 GNEFGHPEWIDFPRGPQVLPTGKFIPGNNNSYDKCRRRFDLGDAEFLRYHGMQQFDQAMQ 718

Qy        714 HLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKI 773

Db        719 HLEEKYGFMTSDHQYVSRKHEEDKVIVFEKGDLVFVFNFHWSNSYFDYRVGCLKPGKYKV 778

Qy        774 VLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYA 821

Db        779 VLDSDAGLFGGFGRIHHTGEHFTNGCQHDNRPHSFSVYTPSRTCVVYA 826


RESULT 11
US-09-792-127-2
; Sequence 2, Application US/09792127
; Patent No. US20020002713A1
; GENERAL INFORMATION:
;  APPLICANT:  Allen, Steve
;  APPLICANT:  Beckles, Diane M.
;  APPLICANT:  Butler, Karla
;  APPLICANT:  Pearlstein, Rich
;  TITLE OF INVENTION:  Starch Branching Enzyme IIb
;  FILE REFERENCE:  BB1439 US NA
;  CURRENT APPLICATION NUMBER: US/09/792,127
;  CURRENT FILING DATE:  2001-02-23
;  PRIOR APPLICATION NUMBER:  60/186098
;  PRIOR FILING DATE:  2000-03-01
;  NUMBER OF SEQ ID NOS:  5
;  SOFTWARE:  Microsoft Office 97
; SEQ ID NO 2
;   LENGTH: 695
;   TYPE: PRT
;   ORGANISM: Triticum aestivum
US-09-792-127-2

  Query Match             69.3%;  Score 3148;  DB 9;  Length 695;
  Best Local Similarity   80.7%;  Pred. No. 5.6e-292;
  Matches  556;  Conservative   71;  Mismatches   62;  Indels    0;  Gaps    0;

Qy        133 KPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFG 192

Db          4 KLRILPPPGNGQQIYEIDPTLRDFKYHLEYRYSLYRRIRSDIDEHEGGMDVFSRGYEKFG 63

Qy        193 FSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPH 252

Db         64 FMRSAEGITYREWAPGADSAALVGDFNNWDPNADHMSKNDLGVWEIFLPNNADGSPPIPH 123

Qy        253 GSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSL 312

Db        124 GSRVKVRMDTPSGIKDSIPAWIKYSVQTPGDIPYNGIYYDPPEEEKYVFKHPQPKRPKSL 183
```

```
Qy        313 RIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFY 372
              ||||:|||||| || |||||||||:||||||:|||||||:|||||||| |||||||||:
Db        184 RIYETHVGMSSPEPKINTYANFRDEVLPRIKRLGYNAVQIMAIQEHSYYGSFGYHVTNFF 243

Qy        373 AASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRG 432
              | ||||||:|:|||||||:||||||:||||:|||||| ||||||| ||||| |||| | ||
Db        244 APSSRFGSPEDLKSLIDRAHELGLVVLMDVVHSHASNNTLDGLNGFDGTDTHYFHGGSRG 303

Qy        433 HHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNY 492
              ||||||||:||||: ||:|||||||||||:|||||||||| |||||||||| ||||:|
Db        304 HHWMWDSRVFNYGNKEVIRFLLSNARWWLEEYKFDGFRFDGATSMMYTHHGLQVTFTGSY 363

Qy        493 NEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHM 552
              :||||:|||||||||||:||:||| :|||||||||||||  :||: ||||||||||
Db        364 HEYFGFATDVDAVVYLMLMNDLIHGFYPEAVTIGEDVSGMPTFALPVQVGGVGFDYRLHM 423

Qy        553 AVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKD 612
              ||||||:|::: || |:||:||| ||||||||||:||||||||||||||||||||||
Db        424 AVADKWIELLKGNDEAWEMGNIVHTLTNRRWLEKCVTYAESHDQALVGDKTIAFWLMDKD 483

Qy        613 MYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHL 672
              |||||||: |||| ||||:|||||||||||||||||||||||||||||||||||    |
Db        484 MYDFMALNGPSTPNIDRGIALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGPQVL 543

Qy        673 PSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRK 732
              |||||:|||| ||||||||||||::: |||||||:||||:||||| ||||||:|||:|||
Db        544 PSGKFIPGNNNSYDKCRRRFDLGDAEFLRYHGMQQFDQAMQHLEEKYGFMTSDHQYVSRK 603

Qy        733 DERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDA 792
              | |::||||:|:|||||||||:||| ||||||||||||:|||||  |||||||: | |
Db        604 HEEDKVIVFEKGDLVFVFNFHWSSSYFDYRVGCLKPGKYKVVLDSDAGLFGGFGRIHHTA 663

Qy        793 EHFSFEGWYDNRPRSFMVYTPCRTAVVYA 821
              || : :  :|||| || |||| || ||||
Db        664 EHVTSDCQHDNRPHSFSVYTPSRTCVVYA 692


RESULT 12
US-10-254-534-4
; Sequence 4, Application US/10254534
; Publication No. US20030046730A1
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/10/254,534
;  CURRENT FILING DATE:  2002-09-26
;  PRIOR APPLICATION NUMBER: US/09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
;   LENGTH: 464
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism:beII gene fragment (branching enz
;   OTHER INFORMATION: to)
US-10-254-534-4

  Query Match             48.5%;  Score 2204;  DB 14;  Length 464;
  Best Local Similarity   84.0%;  Pred. No. 8.8e-202;
  Matches  389;  Conservative   40;  Mismatches   34;  Indels    0;  Gaps    0;

Qy        240 LPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDPPEEKY 299
              |||| |||| |||||||||||||||| |||||||| :|:| | |:|||||||||||:|
Db          1 LPNNVDGSPAIPHGSRVKIRMDTPSGVKDSIPAWINYSLQLPDEIPYNGIYYDPPEEERY 60

Qy        300 VFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHS 359
              :|::|:||:||||||||||:|||| || ||:| ||||:|||||||||||||:|||||||
Db         61 IFQHPRPKKPKSLRIYESHIGMSSPEPKINSYVNFRDEVLPRIKKLGYNAVQIMAIQEHS 120

Qy        360 YYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFD 419
              |||||||||||| | ||||  ||||||||||||||::|||||||||| ||||||||||
Db        121 YYASFGYHVTNFXAPSSRFEXPDDLKSLIDKAHELGIVVLMDIVHSHASNNTLDGLNMFD 180

Qy        420 GTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMY 479
              |||  ||||| ||:|||||||||||:|||||:||||||||||:||||||||||||||||
Db        181 GTDSCYFHSGARGYHWMWDSRLFNYGNWEVLRYLLSNARWWLDEFKFDGFRFDGVTSMMY 240

Qy        480 THHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPV 539
              ||||| | ||||| |||| ||||||||||||:||:||||||:|:|||||||  |||
Db        241 THHGLSVGFTGNYEEYFGLATDVDAVVYLMLVNDLIHGLFPDAITIGEDVSGMPTFXIPV 300

Qy        540 EDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAESHDQALV 599
              :|||||||||||:||||:|:::|||||::|||| |||||| ||||||||||||||||
Db        301 QDGGVGFDYRLHMAIADKWIELLKKRDEDWRVGDIVHTLTNRRWSEKCVSYAESHDQALV 360

Qy        600 GDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGH 659
              |||||||||||||||||||| || |||||:||||||||:|||||||||||||||||||
Db        361 GDKTIAFWLMDKDMYDFMALDRXSTSLIDRGIALHKMIRLVTMGLGGEGYLNFMGNEFGH 420

Qy        660 PEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRY 702
              |||||||| : ||  |  :||| :||||||||||||::::|||
Db        421 PEWIDFPRAEQHLSDGSVIPGNQFSYDKCRRRFDLGDAEYLRY 463


RESULT 13
US-10-336-753-56
; Sequence 56, Application US/10336753
; Publication No. US20030226176A1
; GENERAL INFORMATION:
;  APPLICANT: Guan, Hanping
;  APPLICANT:  Keeling, Peter L.
;  TITLE OF INVENTION: PLANT LIKE STARCHES AND THE METHOD OF MAKING THEM IN
;  TITLE OF INVENTION:  HOSTS
;  FILE REFERENCE: 2461-52
;  CURRENT APPLICATION NUMBER: US/10/336,753
;  CURRENT FILING DATE:  2003-01-06
;  PRIOR APPLICATION NUMBER: US/09/402,254
;  PRIOR FILING DATE: 1999-10-01
;  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/US98/06660
;  PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
;  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/042,939
;  PRIOR FILING DATE: EARLIER FILING DATE: 1997-04-04
;  NUMBER OF SEQ ID NOS: 77
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 56
;   LENGTH: 776
;   TYPE: PRT
;   ORGANISM: Zea mays
US-10-336-753-56

  Query Match             46.7%;  Score 2124;  DB 12;  Length 776;
  Best Local Similarity   56.1%;  Pred. No. 9.6e-194;
  Matches  389;  Conservative  112;  Mismatches  167;  Indels   26;  Gaps    6;

Qy        146 IYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREW 205
              |||:|| |  |: |  ||  ::   :  |:: ||||::||:|| ||| : :| |  ||||
Db         21 IYDLDPKLEIFKDHFRYRMKRFLEQKGSIEENEGSLESFSKGYLKFGINTNEDGTVYREW 80

Qy        206 APGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 265
              || |  | ||||||:||     | ::: ||| | : ::  | | ||| |:|| |
Db         81 APAAQEAELIGDFNDWNGANHKMEKDKFGVWSIKI-DHVKGKPAIPHNSKVKFRFLHGGV 139
```

```
Qy        266 NKDSIPAWIKFSVQAPGEL--PYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSS 323
Db        140 WVDRIPALIRYATVDASKFGAPYDGVHWDPPASERYTFKHPRPSKPAAPRIYEAHVGMSG 199

Qy        324 TEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDD 383
Db        200 EKPAVSTYREFADNVLPRIRANNYNTVQLMAVMEHSYYASFGYHVTNFFAVSSRSGTPED 259

Qy        384 LKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFD---GTDGHYFHSGPRGHHWMWDSR 440
Db        260 LKYLVDKAHSLGLRVLMDVVHSHASNNVTDGLNGYDVGQSTQESYFHAGDRGYHKLWDSR 319

Qy        441 LFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYAT 500
Db        320 LFNYANWEVLRFLLSNLRYWLDEFMFDGFRFDGVTSMLYHHHGINVGFTGNYQEYFSLDT 379

Qy        501 DVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVE 560
Db        380 AVDAVVYMMLANHLMHKLLPEATVVAEDVSGMPVLCRPVDEGGVGFDYRLAMAIPDRWID 439

Qy        561 IIQKRDE-DWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMAL 619
Db        440 YLKNKDDSEWSMGEIAHTLTNRRYTEKCIAYAESHDQSIVGDKTIAFLLMDKEMYTGMSD 499

Qy        620 DRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVP 679
Db        500 LQPASPTIDRGIALQKMIHFITMALGGDGYLNFMGNEFGHPEWIDFPR----------E 548

Qy        680 GNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRII 739
Db        549 GNNWSYDKCRRQWSLVDTDHLRYKYMNAFDQAMNALDERFSFLSSSKQIVSDMNDEEKVI 608

Qy        740 VFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSF-- 797
Db        609 VFERGDLVFVFNFHPKKTYEGYKVGCDLPGKYRVALDSDALVFGGHGRVGHDVDHFTSPE 668

Qy        798 ------EGWYDNRPRSFMVYTPCRTAVVYALVED 825
Db        669 GVPGVPETNFNNRPNSFKVLSPPRTCVAYYRVDE 702
```

RESULT 14
US-10-171-008-9
; Sequence 9, Application US/10171008
; Publication No. US20030126633A1
; GENERAL INFORMATION:
; APPLICANT: Ursula Uwer
; APPLICANT: Claus Frohberg
; APPLICANT: Jens Pilling
; APPLICANT: Volker Landschutze
; TITLE OF INVENTION: Transgenic plants synthesising high amylose starch
; FILE REFERENCE: VOS-36
; CURRENT APPLICATION NUMBER: US/10/171,008
; CURRENT FILING DATE: 2002-09-13
; PRIOR APPLICATION NUMBER: DE 10 12 8363.6
; PRIOR FILING DATE: 2001-06-12
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 9
; LENGTH: 822
; TYPE: PRT
; ORGANISM: Zea mays
US-10-171-008-9

Query Match 46.7%; Score 2124; DB 14; Length 822;
Best Local Similarity 56.1%; Pred. No. 1.1e-193;
Matches 389; Conservative 112; Mismatches 167; Indels 26; Gaps 6;

```
Qy        146 IYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREW 205
Db         84 IYDLDPKLEIFKDHFRYRMKRFLEQKGSIEENEGSLESFSKGYLKFGINTNEDGTVYREW 143

Qy        206 APGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 265
```

```
Db        144 APAAQEAELIGDFNDWNGANHKMEKDKFGVWSIKI-DHVKGKPAIPHNSKVKFRFLHGGV 202

Qy        266 NKDSIPAWIKFSVQAPGEL--PYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSS 323
Db        203 WVDRIPALIRYATVDASKFGAPYDGVHWDPPASERYTFKHPRPSKPAAPRIYEAHVGMSG 262

Qy        324 TEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDD 383
Db        263 EKPAVSTYREFADNVLPRIRANNYNTVQLMAVMEHSYYASFGYHVTNFFAVSSRSGTPED 322

Qy        384 LKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFD---GTDGHYFHSGPRGHHWMWDSR 440
Db        323 LKYLVDKAHSLGLRVLMDVVHSHASNNVTDGLNGYDVGQSTQESYFHAGDRGYHKLWDSR 382

Qy        441 LFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYAT 500
Db        383 LFNYANWEVLRFLLSNLRYWLDEFMFDGFRFDGVTSMLYHHHGINVGFTGNYQEYFSLDT 442

Qy        501 DVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVE 560
Db        443 AVDAVVYMMLANHLMHKLLPEATVVAEDVSGMPVLCRPVDEGGVGFDYRLAMAIPDRWID 502

Qy        561 IIQKRDE-DWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMAL 619
Db        503 YLKNKDDSEWSMGEIAHTLTNRRYTEKCIAYAESHDQSIVGDKTIAFLLMDKEMYTGMSD 562

Qy        620 DRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVP 679
Db        563 LQPASPTIDRGIALQKMIHFITMALGGDGYLNFMGNEFGHPEWIDFPR----------E 611

Qy        680 GNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRII 739
Db        612 GNNWSYDKCRRQWSLVDTDHLRYKYMNAFDQAMNALDERFSFLSSSKQIVSDMNDEEKVI 671

Qy        740 VFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSF-- 797
Db        672 VFERGDLVFVFNFHPKKTYEGYKVGCDLPGKYRVALDSDALVFGGHGRVGHDVDHFTSPE 731

Qy        798 ------EGWYDNRPRSFMVYTPCRTAVVYALVED 825
Db        732 GVPGVPETNFNNRPNSFKVLSPPRTCVAYYRVDE 765
```

RESULT 15
US-10-437-963-170346
; Sequence 170346, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; APPLICANT: Wu, Wei
; APPLICANT: Boukharov, Andrey A.
; APPLICANT: Barbazuk, Brad
; APPLICANT: Li, Ping
; TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53221)B
; CURRENT APPLICATION NUMBER: US/10/437,963
; CURRENT FILING DATE: 2003-05-14
; NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 170346
; LENGTH: 827
; TYPE: PRT
; ORGANISM: Oryza sativa
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT4530_68681C.1.pep
US-10-437-963-170346

Query Match 46.6%; Score 2119; DB 16; Length 827;
Best Local Similarity 54.0%; Pred. No. 3.2e-193;

Matches 401; Conservative 114; Mismatches 170; Indels 58; Gaps 12;

```
Qy        132 SKPR----------SIPPPGRGQR-------------IYDIDPSLTGFRQHLDYRYSQY 167
Db         40 SSPRRSWPGKVKTNFSVPATARKNKTMVTVVEEVDHLPIYDLDPKLEEFKDHFNYRIKRY 99

Qy        168 KRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADV 227
Db        100 LDQKCLIEKHEGGLEEFSKGYLKFGINTVDGATIYREWAPAAQEAQLIGEFNNWNGAKHK 159

Qy        228 MTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGN-KDSIPAWIKFSVQAPGEL-- 284
Db        160 MEKDKFGIWSIKI-SHVNGKPAIPHNSKVKFRFRHGGGAWVDRIPAWIRYATFDASKFGA 218

Qy        285 PYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKK 344
Db        219 PYDGVHWDPPACERYVFKHPRPPKPDAPRIYEAHVGMSGEEPEVSTYREFADNVLPRIRA 278

Qy        345 LGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVH 404
Db        279 NNYNTVQLMAIMEHSYYASFGYHVTNFFAVSSRSGTPEDLKYLVDKAHSLGLRVLMDVVH 338

Qy        405 SHASTNTLDGLNMFD-GTDGH--YFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWL 461
Db        339 SHASNNVTDGLNGYDVGQNTHESYFHTGDRGYHKLWDSRLFNYANWEVLRFLLSNLRYWM 398

Qy        462 DEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPE 521
Db        399 DEFMFDGFRFDGVTSMLYHHHGINKGFTGNYKEYFSLDTDVDAIVYMMLANHLMHKLLPE 458

Qy        522 AVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQ-KRDEDWKMGDIVHMLTN 580
Db        459 ATIVAEDVSGMPVLCRPVDEGGVGFDFRLAMAIPDRWIDYLKNKEDRKWSMSEIVQTLTN 518

Qy        581 RRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLI 640
Db        519 RRYTEKCIAYAESHDQSIVGDKTIAFLLMDKEMYTGMSDLQPASPTINRGIALQKMIHFI 578

Qy        641 TMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHL 700
Db        579 TMALGGDGYLNFMGNEFGHPEWIDFPR-----------EGNNWSYDKCRRQWSLVDTDHL 627

Qy        701 RY-------HGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFH 753
Db        628 RYKVVPKYINYMNAFDQAMNALEEEFSFLSSSKQIVSDMNEKDKVIVFERGDLVFVFNFH 687

Qy        754 WTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHF-SFEGW-------YDNRP 805
Db        688 PNKTYKGYKVGCDLPGKYRVALDSDALVFGGHGRVGHDVDHFTSPEGMPGVPETNFNNRP 747

Qy        806 RSFMVYTPCRTAVVYALVEDEVE 828
Db        748 NSFKVLSPPRTCVAYYRVDEDRE 770
```

Search completed: July 13, 2004, 16:13:00
Job time : 54 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: July 13, 2004, 15:59:55 ; Search time 22 Seconds
(without alignments)
1961.787 Million cell updates/sec

Title: US-09-297-703C-29
Perfect score: 4545
Sequence: 1 MGHYTISGIRFPCAPLCKSQ.....AVVYALVEDEVENELEPVAG 836

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	3387.5	74.5	878	3	US-09-087-277-2	Sequence 2, Appli
2	3387.5	74.5	878	4	US-09-658-499-2	Sequence 2, Appli
3	3261.5	71.8	814	4	US-09-731-166-10	Sequence 10, Appl
4	3209	70.6	729	4	US-09-609-040-4	Sequence 4, Appli
5	3169	69.7	799	4	US-09-731-166-12	Sequence 12, Appl
6	3160	69.5	799	3	US-08-941-445A-15	Sequence 15, Appl
7	2204	48.5	464	3	US/09/087	Sequence 4, Appli
8	2204	48.5	464	4	US-09-658-499-4	Sequence 4, Appli
9	2192.5	48.2	906	4	US-09-367-895-41	Sequence 41, Appl
10	2124	46.7	822	3	US-08-941-445A-17	Sequence 17, Appl
11	2124	46.7	822	4	US-09-731-166-14	Sequence 14, Appl
12	1635.5	36.0	566	3	US-08-104-158-2	Sequence 2, Appli
13	1635.5	36.0	566	4	US-09-609-040-2	Sequence 2, Appli
14	576	12.7	762	4	US-09-579-365-2	Sequence 2, Appli
15	570	12.5	621	4	US-09-537-120-2	Sequence 2, Appli
16	550.5	12.1	768	4	US-09-489-039A-11131	Sequence 11131, A
17	542.5	11.9	652	3	US-08-528-026C-4	Sequence 4, Appli
18	520	11.4	722	4	US-09-198-452A-513	Sequence 513, App
19	503.5	11.1	823	4	US-09-252-991A-24768	Sequence 24768, A
20	266.5	5.9	559	3	US-09-242-690A-15	Sequence 15, Appl
21	266.5	5.9	559	4	US-09-298-924-6	Sequence 6, Appli
22	266.5	5.9	559	4	US-09-908-855-15	Sequence 15, Appl
23	266.5	5.9	648	4	US-09-252-991A-24628	Sequence 24628, A
24	245	5.4	893	4	US-09-514-302-4	Sequence 4, Appli
25	245	5.4	1938	4	US-09-514-302-2	Sequence 2, Appli
26	243.5	5.4	793	4	US-09-463-238-5	Sequence 5, Appli
27	232.5	5.1	606	3	US-09-187-124-2	Sequence 2, Appli
28	232.5	5.1	606	4	US-09-850-936-2	Sequence 2, Appli
29	226	5.0	325	3	US-08-961-083-80	Sequence 80, Appl
30	226	5.0	325	4	US-09-536-784-80	Sequence 80, Appl
31	224.5	4.9	589	1	US-08-399-646-2	Sequence 2, Appli
32	224.5	4.9	589	1	US-08-607-321-2	Sequence 2, Appli
33	224.5	4.9	589	2	US-08-961-240-2	Sequence 2, Appli
34	224.5	4.9	589	2	US-08-605-501-2	Sequence 2, Appli
35	224.5	4.9	596	1	US-08-399-646-12	Sequence 12, Appl
36	224.5	4.9	596	1	US-08-607-321-12	Sequence 12, Appl
37	224.5	4.9	596	2	US-08-961-240-12	Sequence 12, Appl
38	224.5	4.9	596	2	US-08-605-501-12	Sequence 12, Appl
39	223	4.9	597	1	US-08-399-646-4	Sequence 4, Appli
40	223	4.9	597	1	US-08-607-321-4	Sequence 4, Appli
41	223	4.9	597	2	US-08-961-240-4	Sequence 4, Appli
42	223	4.9	597	2	US-08-605-501-4	Sequence 4, Appli
43	223	4.9	598	1	US-08-399-646-14	Sequence 14, Appl
44	223	4.9	598	1	US-08-607-321-14	Sequence 14, Appl
45	223	4.9	598	2	US-08-961-240-14	Sequence 14, Appl

ALIGNMENTS

RESULT 1
US-09-087-277-2
; Sequence 2, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/09/087,277B
; CURRENT FILING DATE: 1998-05-29
; EARLIER APPLICATION NUMBER: PCT/SE96/01558
; EARLIER FILING DATE: 1996-11-28
; EARLIER APPLICATION NUMBER: SE 9504272-7
; EARLIER FILING DATE: 1995-11-29
; EARLIER APPLICATION NUMBER: SE 9601506-0
; EARLIER FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 878
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:beII gene (branching enzyme II) f
US-09-087-277-2

Query Match 74.5%; Score 3387.5; DB 3; Length 878;
Best Local Similarity 71.9%; Pred. No. 0;
Matches 621; Conservative 92; Mismatches 116; Indels 35; Gaps 5;

```
Qy          4 YTISGIRFPCAP-LCKSQSTGFHGYRRTSSCLSFNFKEAFSRRVFSGKSSHESDSSNVMV 62
              ||:||:|||  | : ||     :| || ::   |  | : ||:: : |||: |:|    |
Db          3 YTLSGVRFPTVPSVYKSNGFSSNGDRRNANXSVFLKKHSLSRKILAEKSSYNSESRPSTV 62

Qy         63 TASKRVL-PDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDD----KIVEDEV--- 114
               || :|| |  : :  |||||| |    |  | |   |||:|  |:     |   |:|
Db         63 AASGKVLVPGTQSDSSSSSTDQFEFTETSPENSPASTDVDSSTMEHARQIKTENDDVEPS 122

Qy        115 -----NKESVPMRETVSIRKIGS--------------------KPRSIPPPGRGQRIYD 148
                  : | :    :: ::: |                    : | |||| ||:||:
Db        123 SDLTGSVEELDFASSLQLQEGGKLEESKTLNTSEETIIDESDRIRERGIPPPGLGQKIYE 182

Qy        149 IDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPG 208
              ||| || :|||||||||||:||| |||||| |:||||||| ||:|| ||||||||||
Db        183 IDPLLTNYRQHLDYRYSQYKKLREAIDKYEGGLEAFSRGYEKMGFTRSATGITYREWAPG 242
```

```
Qy        209 ATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
Db        243 AQSAALIGDFNNWDANADIMTRNEFGVWEIFLPNNVDGSPAIPHGSRVKIRMDTPSGVKD 302

Qy        269 SIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVI 328
Db        303 SIPAWINYSLQLPDEIPYNGIYYDPPEEERYIFQHPRPKKPKSLRIYESHIGMSSPEPKI 362

Qy        329 NTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLI 388
Db        363 NSYVNFRDEVLPRIKKLGYNAVQIMAIQEHSYYASFGYHVTNFXAPSSRFGXPDDLKSLI 422

Qy        389 DKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWE 448
Db        423 DKAHELGIVVLMDIVHSHASNNTLDGLNMFDGTDSCYFHSGARGYHWMWDSRLFNYGNWE 482

Qy        449 VLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYL 508
Db        483 VLRYLLSNARWWLDEFKFDGFRFDGVTSMMYTHHGLSVGFTGNYEEYFGLATDVDAVVYL 542

Qy        509 MLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDED 568
Db        543 MLVNDLIHGLFPDAITIGEDVSGMPTFXIPVQDGGVGFDYRLHMAIADKWIELLKKRDED 602

Qy        569 WKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLID 628
Db        603 WRVGDIVHTLTNRRWSEKCVSYAESHDQALVGDKTIAFWLMEKDMYDFMALDRXSTSLID 662

Qy        629 RGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKC 688
Db        663 RGIALHKMIRLVTMGLGGEGYLNFMGNEFGHPEWIDFPRAEQHLSDGSVIPGNQFSYDKC 722

Qy        689 RRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVF 748
Db        723 RRRFDLGDAEYLRYRGLQEFDRAMQYLEDKYEFMTSEHQFISRKDEGDRMIVFEKGNLVF 782

Qy        749 VFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSF 808
Db        783 VFNFHWTKSYSDYRIGCLKPGKYKVALDSDDPLFGGFGRIDHNAEYFTFEGWYDDRPRSI 842

Qy        809 MVYTPCRTAVVYALVEDEVENELE 832
Db        843 MVYAPSRTAVVYALVDKEEEEEEE 866


RESULT 2
US-09-658-499-2
; Sequence 2, Application US/09658499
; Patent No. 6469231
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/09/658,499
;  CURRENT FILING DATE:  2000-09-08
;  PRIOR APPLICATION NUMBER: 09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
;   LENGTH: 878
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism:beII gene (branching enzyme II) f
;   OTHER INFORMATION: Solanum tuberosum (potato)
US-09-658-499-2

  Query Match             74.5%;  Score 3387.5;  DB 4;  Length 878;
  Best Local Similarity   71.9%;  Pred. No. 0;
  Matches  621;  Conservative   92;  Mismatches  116;  Indels   35;  Gaps    5;

Qy          4 YTISGIRFPCAP-LCKSQSTGFHGYRRTSSCLSFNFKEAFSRRVFSGKSSHESDSSNVMV 62
Db          3 YTLSGVRFPTVPSVYKSNGFSSNGDRRNANXSVFLKKHSLSRKILAEKSSYNSESRPSTV 62

Qy         63 TASKRVL-PDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDD----KIVEDEV--- 114
Db         63 AASGKVLVPGTQSDSSSSSTDQFEFTETSPENSPASTDVDSSTMEHARQIKTENDDVEPS 122

Qy        115 -----NKESVPMRETVSIRKIGS--------------------KPRSIPPPGRGQRIYD 148
Db        123 SDLTGSVEELDFASSLQLQEGGKLEESKTLNTSEETIIDESDRIRERGIPPPGLGQKIYE 182

Qy        149 IDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPG 208
Db        183 IDPLLTNYRQHLDYRYSQYKKLREAIDKYEGGLEAFSRGYEKMGFTRSATGITYREWAPG 242

Qy        209 ATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKD 268
Db        243 AQSAALIGDFNNWDANADIMTRNEFGVWEIFLPNNVDGSPAIPHGSRVKIRMDTPSGVKD 302

Qy        269 SIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVI 328
Db        303 SIPAWINYSLQLPDEIPYNGIYYDPPEEERYIFQHPRPKKPKSLRIYESHIGMSSPEPKI 362

Qy        329 NTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLI 388
Db        363 NSYVNFRDEVLPRIKKLGYNAVQIMAIQEHSYYASFGYHVTNFXAPSSRFGXPDDLKSLI 422

Qy        389 DKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWE 448
Db        423 DKAHELGIVVLMDIVHSHASNNTLDGLNMFDGTDSCYFHSGARGYHWMWDSRLFNYGNWE 482

Qy        449 VLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYL 508
Db        483 VLRYLLSNARWWLDEFKFDGFRFDGVTSMMYTHHGLSVGFTGNYEEYFGLATDVDAVVYL 542

Qy        509 MLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDED 568
Db        543 MLVNDLIHGLFPDAITIGEDVSGMPTFXIPVQDGGVGFDYRLHMAIADKWIELLKKRDED 602

Qy        569 WKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLID 628
Db        603 WRVGDIVHTLTNRRWSEKCVSYAESHDQALVGDKTIAFWLMEKDMYDFMALDRXSTSLID 662

Qy        629 RGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKC 688
Db        663 RGIALHKMIRLVTMGLGGEGYLNFMGNEFGHPEWIDFPRAEQHLSDGSVIPGNQFSYDKC 722

Qy        689 RRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVF 748
Db        723 RRRFDLGDAEYLRYRGLQEFDRAMQYLEDKYEFMTSEHQFISRKDEGDRMIVFEKGNLVF 782

Qy        749 VFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSF 808
Db        783 VFNFHWTKSYSDYRIGCLKPGKYKVALDSDDPLFGGFGRIDHNAEYFTFEGWYDDRPRSI 842

Qy        809 MVYTPCRTAVVYALVEDEVENELE 832
Db        843 MVYAPSRTAVVYALVDKEEEEEEE 866


RESULT 3
US-09-731-166-10
; Sequence 10, Application US/09731166
```

; Patent No. 6639126
; GENERAL INFORMATION:
; APPLICANT: Sewalt, Vincent J. H.
; APPLICANT: Singletary, George W.
; TITLE OF INVENTION: Production of Modified Polysaccarides
; FILE REFERENCE: 35718/206348
; CURRENT APPLICATION NUMBER: US/09/731,166
; CURRENT FILING DATE: 2000-12-06
; PRIOR APPLICATION NUMBER: 60/169,993
; PRIOR FILING DATE: 1999-12-06
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 814
; TYPE: PRT
; ORGANISM: Zea mays
US-09-731-166-10

Query Match 71.8%; Score 3261.5; DB 4; Length 814;
Best Local Similarity 74.0%; Pred. No. 8.6e-309;
Matches 604; Conservative 70; Mismatches 109; Indels 33; Gaps 5;

```
Qy          36 FNFKEAFSRRVFS-----GKSSHESDSSNVMVTASKRV---------LPDGRIECYSSST 81
               |  |:|||| | |      ||       |: :::::: |         :|:  :    :|:
Db           7 FRRKDAFSRTVLSCAGAPGKVLVPGGGSDDLLSSAEPVVDTQPEELQIPEAELTVEKTSS 66

Qy          82 DQLEAPGTVSEESQVLTDVESLIMDDKI---------VEDEVNKESVPMRETVSIRKIGS 132
                  :   |:| |  :   |   : : |         ::   |   |: |
Db          67 SPTQTTSAVAEASSGVEAEERPELSEVIGVGGTGGTKIDGAGIKAKAPLVE--------E 118

Qy         133 KPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFG 192
               ||| ||||| |||||:||| | ||| |||||||:||||  ||::|| |||||||||| |
Db         119 KPRVIPPPGDGQRIYEIDPMLEGFRGHLDYRYSEYKRLRAAIDQHEGGLDAFSRGYEKLG 178

Qy         193 FSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPH 252
               |:||  |||||||||||  |||:||||||||||| | :|| |||||||||||||||| |||
Db         179 FTRSAEGITYREWAPGAYSAALVGDFNNWNPNADAMARNEYGVWEIFLPNNADGSPAIPH 238

Qy         253 GSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSL 312
               |||||||||||||| ||||||||||||||||:|||||||||||||||||:|||||||||
Db         239 GSRVKIRMDTPSGVKDSIPAWIKFSVQAPGEIPYNGIYYDPPEEEKYVFKHPQPKRPKSL 298

Qy         313 RIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFY 372
               |||||||||||  |||||||||:|||||||||||||||||||||||||||||||||||:
Db         299 RIYESHVGMSSPEPKINTYANFRDEVLPRIKKLGYNAVQIMAIQEHSYYASFGYHVTNFF 358

Qy         373 AASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRG 432
               | |||||||:|||||||||||||||||||||||:| |||||| ||||| |||| ||||
Db         359 APSSRFGTPEDLKSLIDKAHELGLLVLMDIVHSHSSNNTLDGLNGFDGTDTHYFHGGPRG 418

Qy         433 HHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNY 492
               |||||||||||||||||||||||||||:|||||||||||||||||||||||||||||||||
Db         419 HHWMWDSRLFNYGSWEVLRFLLSNARWWLEEYKFDGFRFDGVTSMMYTHHGLQVTFTGNY 478

Qy         493 NEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHM 552
               ||||:|||||||||||:||:| ||:|||:|||||||||| ||||:|||||||||||||||
Db         479 GEYFGFATDVDAVVYLMLVNDLIRGLYPEAVSIGEDVSGMPTFCIPVQDGGVGFDYRLHM 538

Qy         553 AVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKD 612
               || |||:|:::: || |:|||||| ||||||||||:| |||||||||||||||||||||||
Db         539 AVPDKWIELLKQSDEYWEMGDIVHTLTNRRWLEKCVTYCESHDQALVGDKTIAFWLMDKD 598

Qy         613 MYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHL 672
               |||||||||||||| |||||:||||||||:|||||||||||||||||||||||||||||||
Db         599 MYDFMALDRPSTPRIDRGIALHKMIRLVTMGLGGEGYLNFMGNEFGHPEWIDFPRGPQSL 658

Qy         673 PSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRK 732
               |:|  :|||| |:|||||||||:: :||| ||||||||:|||| | |||||:| |:|||
Db         659 PNGSVIPGNNNSFDKCRRRFDLGDADYLRYRGMQEFDQAMQHLEGKYEFMTSDHSYVSRK 718

Qy         733 DERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDA 792
               | |::|:||||:|||||||||::|| |||||| |||||||||||| ||||| || |||
Db         719 HEEDKVIIFERGDLVFVFNFHWSNSYFDYRVGCFKPGKYKIVLDSDDGLFGGFSRLDHDA 778

Qy         793 EHFSFEGWYDNRPRSFMVYTPCRTAVVYAL--VEDE 826
               |:|: :  :|||| || || | |||||||    |||
Db         779 EYFTADWPHDNRPCSFSVYAPSRTAVVYAPAGAEDE 814

RESULT 4
US-09-609-040-4
; Sequence 4, Application US/09609040
; Patent No. 6570066
; GENERAL INFORMATION:
; APPLICANT: Willmitzer, et al.
; TITLE OF INVENTION: NUCLEOTIDE SEQUENCES ENCODING ENZYMES THAT ALTER THE CARBOHYDRATE
; TITLE OF INVENTION: CONCENTRATION AND COMPOSITION IN PLANTS
; FILE REFERENCE: 514413-3515.1
; CURRENT APPLICATION NUMBER: US/09/609,040
; CURRENT FILING DATE: 2000-06-30
; PRIOR APPLICATION NUMBER: PCT/EP92/00302
; PRIOR FILING DATE: 1992-02-11
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4
; LENGTH: 729
; TYPE: PRT
; ORGANISM: Triticum aestivum
US-09-609-040-4

Query Match 70.6%; Score 3209; DB 4; Length 729;
Best Local Similarity 78.0%; Pred. No. 9.4e-304;
Matches 575; Conservative 75; Mismatches 77; Indels 10; Gaps 3;

```
Qy   88 GTVSEESQVLTDVESLIMDDKIVEDEVNKESVPMRETVSIRKIGSKPRSIPPPGRGQRIY 147
               | :|: | : ::   : : | | | ::| | :| ||| :| || ||:||
Db   3 GGTAEKLQSSEPTQGIV---ETITDGVTK---GVKELV----VGEKPRVVPKPGDGQKIY 52

Qy   148 DIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAP 207
               :|||:| || |||||| :|||:| ||::|| |:|||||||| ||:|| |||||||||
Db   53 EIDPTLKDFRSHLDYRYREYKRIRAAIDQHEGGLEAFSRGYEKLGFTRSAEGITYREWAP 112

Qy   208 GATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNK 267
               || |||:|||||||||| ||::: ||||||||||||||| |||||||||||||||| |
Db   113 GAHSAALVGDFNNWNPNADAMTRDDYGVWEIFLPNNADGSSAIPHGSRVKIRMDTPSGVK 172

Qy   268 DSIPAWIKFSVQAPGELPYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPV 327
               ||| |||||||||||:|:|||||||||||||||::|||||:||||||:|||| ||
Db   173 DSISAWIKFSVQAPGEIPFNGIYYDPPEEEKYVFQHPQPKRPESLRIYESHIGMSSPEPK 232

Qy   328 INTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSL 387
               ||:||||||:||||||:|||||||:||||||||||||||||:| |||||||:|||||
Db   233 INSYANFRDEVLPRIKRLGYNAVQIMAIQEHSYYASFGYHVTNFFAPSSRFGTPEDLKSL 292

Qy   388 IDKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSW 447
               ||:|||||||||||||:| ||||||| ||||| |||| ||||||||||||||||||||||
Db   293 IDRAHELGLLVLMDIVHSHSSNNTLDGLNGFDGTDTHYFHGGPRGHHWMWDSRLFNYGSW 352

Qy   448 EVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVY 507
               |||||||||||||:|| |||||||||||||||||||: ||||| ||||:|||||||||
Db   353 EVLRFLLSNARWWLEEYNFDGFRFDGVTSMMYTHHGLQMTFTGNYGEYFGFATDVDAVVY 412

Qy   508 LMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDE 567
               |||:||:||||:|:||:|||||||||| |||| |||||||||||||||:|:::: ||
Db   413 LMLVNDLIHGLYPDAVSIGEDVSGMPTFCIPVPDGGVGFDYRLHMAVADKWIELLKQSDE 472

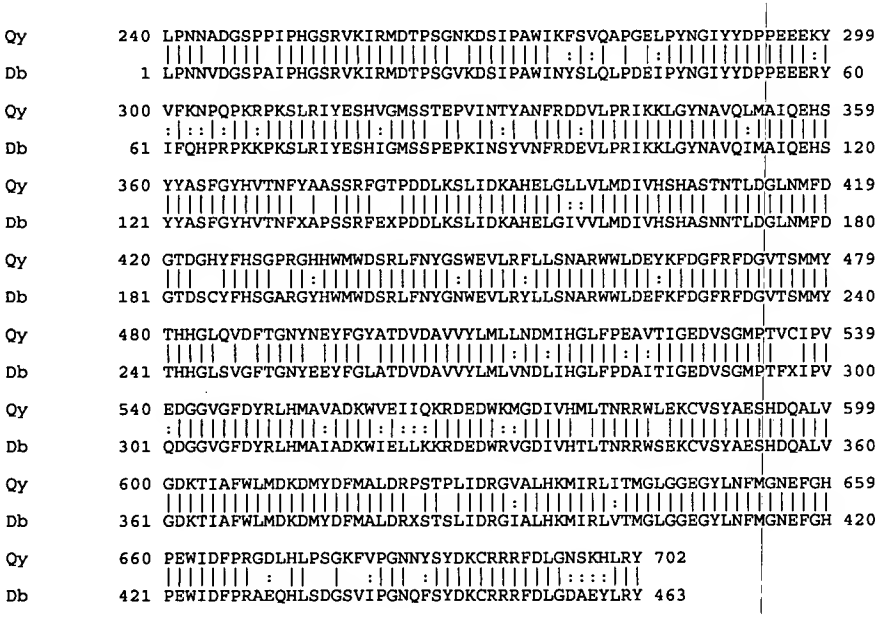
Qy   568 DWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLI 627
               |||||||| |||:|||||||:|||||||||||||||||||||||||||||||||||| |
Db   473 SWKMGDIVHTLTNKRWLEKCVTYAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPRI 532

Qy   628 DRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDK 687
               |||:|||||||:||||| ||||||||||||||||||| ||:|| :|||| :|||
Db   533 DRGIALHKMIRLVTMGLGGESYLNFMGNEFGHPEWIDFPRGPQTLPTGKVLPGNNNNYDK 592

Qy   688 CRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLV 747
               ||||||||::: ||| ||||||||:||||| ||||||||||:||| | |::|:||||:||
```
```

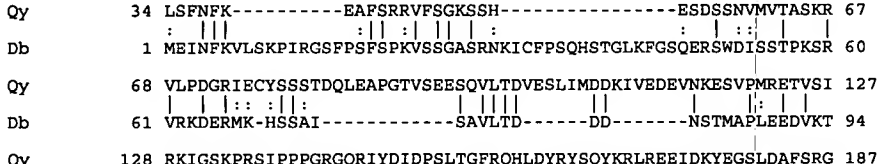
```
Db        593 CRRRFDLGDAEFLRYRGMQEFDQAMQHLEEKYGFMTSEHQYVSRKHEEDKVIIFERGDLV 652

Qy        748 FVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRS 807

Db        653 FVFNFHWSNSFFDYRVGCSKPGKYKVALDSDDALFGGFSRLDHDVDYFTTEHPHDNRPRS 712

Qy        808 FMVYTPCRTAVVYALVE 824

Db        713 FSVYTPSRTAVVYALTE 729


RESULT 5
US-09-731-166-12
; Sequence 12, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
;  APPLICANT:  Sewalt, Vincent J. H.
;  APPLICANT:  Singletary, George W.
;  TITLE OF INVENTION:  Production of Modified Polysaccarides
;  FILE REFERENCE:  35718/206348
;  CURRENT APPLICATION NUMBER: US/09/731,166
;  CURRENT FILING DATE:  2000-12-06
;  PRIOR APPLICATION NUMBER:  60/169,993
;  PRIOR FILING DATE:  1999-12-06
;  NUMBER OF SEQ ID NOS:  16
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 799
;   TYPE: PRT
;   ORGANISM: Zea mays
US-09-731-166-12

  Query Match             69.7%;  Score 3169;  DB 4;  Length 799;
  Best Local Similarity   74.4%;  Pred. No. 8.8e-300;
  Matches  574;  Conservative   80;  Mismatches   78;  Indels   40;  Gaps    5;

Qy         64 ASKRVL-PDG-------RIECYSSSTDQLEAPGTVSEESQV---LTDVESLIMDDKIVED 112

Db         57 ARKAVMVPEGENDGLASRADSAQFQSDELEVP-DISEETTCGAGVADAQAL--------- 106

Qy        113 EVNKESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLRE 172

Db        107 ------------------NRVRVVPPPSDGQKIFQIDPMLQGYKYHLEYRYSLYRRIRS 147

Qy        173 EIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNE 232

Db        148 DIDEHEGGLEAFSRSYEKFGFNRSAEGITYREWAPGAFSAALVGDFNNWDPNADRMSKNE 207

Qy        233 CGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYD 292

Db        208 FGVWEIFLPNNADGTSPIPHGSRVKVRMDTPSGIKDSIPAWIKYSVQAPGEIPYDGIYYD 267

Qy        293 PPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQL 352

Db        268 PPEEVKYVFRHAQPKRPKSLRIYETHVGMSSPEPKINTYVNFRDEVLPRIKKLGYNAVQI 327

Qy        353 MAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTL 412

Db        328 MAIQEHSYYGSFGYHVTNFFAPSSRFGTPEELKSLIDRAHELGLLVLMDVVHSHASSNTL 387

Qy        413 DGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFD 472

Db        388 DGLNGFDGTDTHYFHSGPRGHHWMWDSRLFNYGNWEVLRFLLSNARWWLEEYKFDGFRFD 447

Qy        473 GVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGM 532

Db        448 GVTSMMYTHHGLQVTFTGNFNEYFGFATDVDAVVYLMLVNDLIHGLYPEAVTIGEDVSGM 507

Qy        533 PTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAE 592

Db        508 PTFALPVHDGGVGFDYRMHMAVADKWIDLLKQSDETWKMGDIVHTLTNRRWLEKCVTYAE 567

Qy        593 SHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNF 652

Db        568 SHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPTIDRGIALHKMIRLITMGLGGEGYLNF 627

Qy        653 MGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAI 712

Db        628 MGNEFGHPEWIDFPRGPQRLPSGKFIPGNNNSYDKCRRRFDLGDADYLRYHGMQEFDQAM 687

Qy        713 QHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYK 772

Db        688 QHLEQKYEFMTSDHQYISRKHEEDKVIVFEKGDLVFVFNFHCNNSYFDYRIGCRKPGVYK 747

Qy        773 IVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYALVE 824

Db        748 VVLDSDAGLFGGFSRIHHAAEHFTADCSHDNRPYSFSVYTPSRTCVVYAPVE 799


RESULT 6
US-08-941-445A-15
; Sequence 15, Application US/08941445A
; Patent No. 6107060
;  GENERAL INFORMATION:
;    APPLICANT:  Keeling, Peter
;    APPLICANT:  Guan, Hanping
;    TITLE OF INVENTION:  Starch Encapsulation
;    NUMBER OF SEQUENCES:  37
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Greenlee, Winner and Sullivan, P.C.
;      STREET:  5370 Manhattan Circle
;      CITY:  Boulder
;      STATE:  CO
;      COUNTRY:  US
;      ZIP:  80303
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/941,445A
;      FILING DATE:  30-SEP-1997
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/026,855
;      FILING DATE:  30-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Winner, Ellen P
;      REGISTRATION NUMBER:  28,547
;      REFERENCE/DOCKET NUMBER:  89-97
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 499-8080
;      TELEFAX:  (303) 499-8089
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 799 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-941-445A-15

  Query Match             69.5%;  Score 3160;  DB 3;  Length 799;
  Best Local Similarity   74.2%;  Pred. No. 6.7e-299;
  Matches  573;  Conservative   79;  Mismatches   80;  Indels   40;  Gaps    5;

Qy         64 ASKRVL-PDG-------RIECYSSSTDQLEAPGTVSEESQV---LTDVESLIMDDKIVED 112

Db         57 ARKAVMVPEGENDGLASRADSAQFQSDELEVP-DISEETTCGAGVADAQAL--------- 106

Qy        113 EVNKESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLRE 172

Db        107 ------------------NRVRVVPPPSDGQKIFQIDPMLQGYKYHLEYRYSLYRRIRS 147

Qy        173 EIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNE 232
```

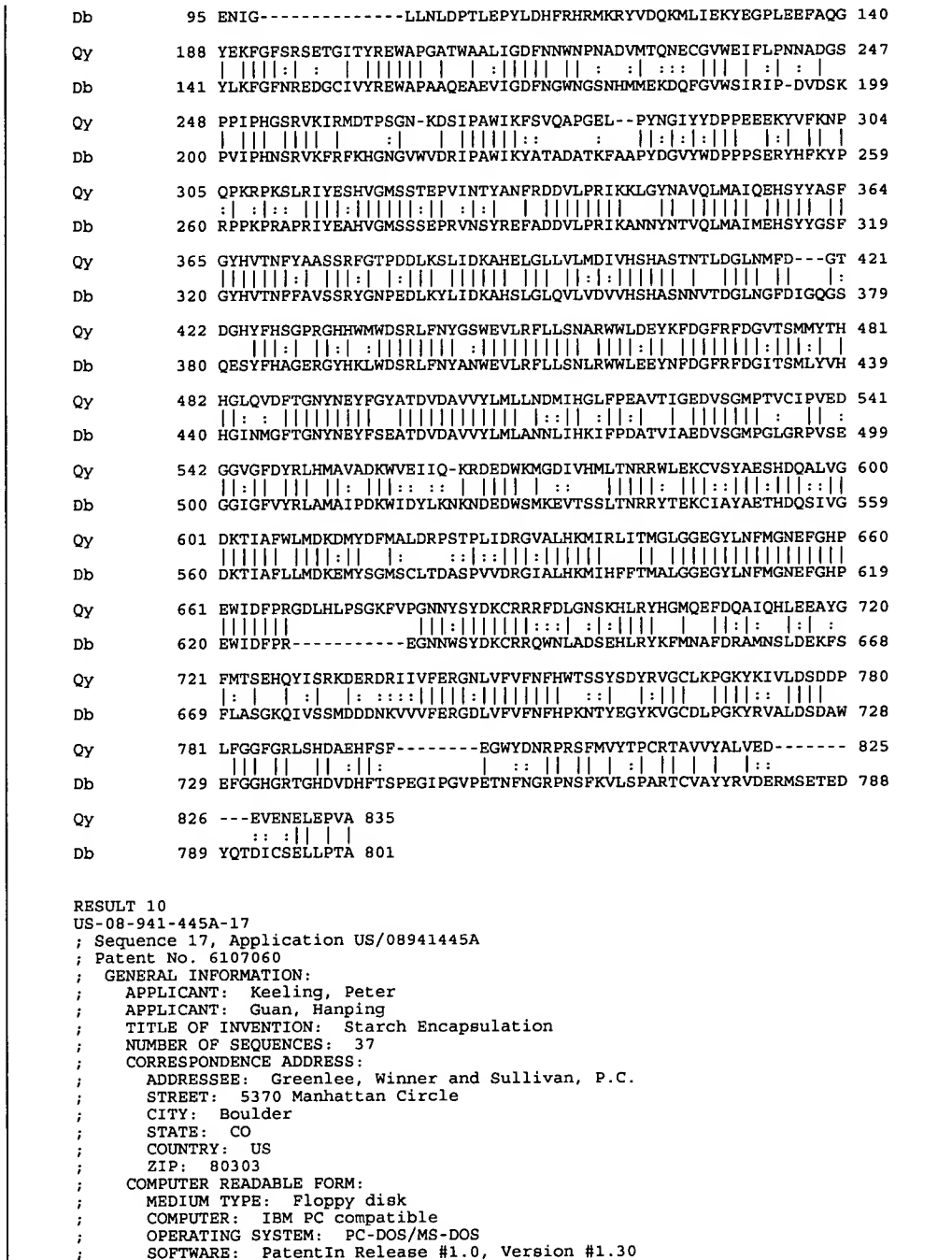
```
Db        148 DIDEHEGGLEAFSRSYEKFGFNASAEGITYREWAPGAFSAALVGDVNNWDPNADRMSKNE 207

Qy        233 CGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYD 292

Db        208 FGVWEIFLPNNADGTSPIPHGSRVKVRMDTPSGIKDSIPAWIKYSVQAPGEIPYDGIYYD 267

Qy        293 PPEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQL 352

Db        268 PPEEVKYVFRHAQPKRPKSLRIYETHVGMSSPEPKINTYVNFRDEVLPRIKKLGYNAVQI 327

Qy        353 MAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTL 412

Db        328 MAIQEHSYYGSFGYHVTNFFAPSSRFGTPEDLKSLIDRAHELGLLVLMDVVHSHASSNTL 387

Qy        413 DGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFD 472

Db        388 DGLNGFDGTDTHYFHSGPRGHHWMWDSRLFNYGNWEVLRFLLSNARWWLEEYKFDGFRFD 447

Qy        473 GVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGM 532

Db        448 GVTSMMYTHHGLQVTFTGNFNEYFGFATDVDAVVYLMLVNDLIHGLYPEAVTIGEDVSGM 507

Qy        533 PTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAE 592

Db        508 PTFALPVHDGGVGFDYRMHMAVADKWIDLLKQSDETWKMGDIVHTLTNRRWLEKCVTYAE 567

Qy        593 SHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNF 652

Db        568 SHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPTIDRGIALHKMIRLITMGLGGEGYLNF 627

Qy        653 MGNEFGHPEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAI 712

Db        628 MGNEFGHPEWIDFPRGPQRLPSGKFIPGNNNSYDKCRRRFDLGDADYLRYHGMQEFDQAM 687

Qy        713 QHLEEAYGFMTSEHQYISRKDERDRIIVFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYK 772

Db        688 QHLEQKYEFMTSDHQYISRKHEEDKVIVFEKGDLVFVFNFHCNNSYFDYRIGCRKPGVYK 747

Qy        773 IVLDSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYALVE 824

Db        748 VVLDSDAGLFGGFSRIHHAAEHFTADCSHDNRPYSFSVYTPSRTCVVYAPVE 799


RESULT 7
US/09/087
; Sequence 4, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT: KHOSNOODI, Jamshid
;  APPLICANT: LARSSON, Clas-Tomas
;  APPLICANT: LARSSON, Hakan
;  APPLICANT: RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/09/087,277B
;  CURRENT FILING DATE: 1998-05-29
;  EARLIER APPLICATION NUMBER: PCT/SE96/01558
;  EARLIER FILING DATE: 1996-11-28
;  EARLIER APPLICATION NUMBER: SE 9504272-7
;  EARLIER FILING DATE: 1995-11-29
;  EARLIER APPLICATION NUMBER: SE 9601506-0
;  EARLIER FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
;    LENGTH: 464
;    TYPE: PRT
;    ORGANISM: Unknown
;    FEATURE:
;    OTHER INFORMATION: Description of Unknown Organism:beII gene fragment (branching enz
US/09/087,277-4

  Query Match           48.5%;  Score 2204;  DB 3;  Length 464;
  Best Local Similarity   84.0%;  Pred. No. 5e-206;
  Matches  389;  Conservative   40;  Mismatches   34;  Indels    0;  Gaps    0;

Qy        240 LPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGIYYDPPEEEKY 299

Db          1 LPNNVDGSPAIPHGSRVKIRMDTPSGVKDSIPAWINYSLQLPDEIPYNGIYYDPPEEERY 60

Qy        300 VFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHS 359

Db         61 IFQHPRPKKPKSLRIYESHIGMSSPEPKINSYVNFRDEVLPRIKKLGYNAVQIMAIQEHS 120

Qy        360 YYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFD 419

Db        121 YYASFGYHVTNFXAPSSRFEXPDDLKSLIDKAHELGIVVLMDIVHSHASNNTLDGLNMFD 180

Qy        420 GTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMY 479

Db        181 GTDSCYFHSGARGYHWMWDSRLFNYGNWEVLRYLLSNARWWLDEFKFDGFRFDGVTSMMY 240

Qy        480 THHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPV 539

Db        241 THHGLSVGFTGNYEEYFGLATDVDAVVYLMLVNDLIHGLFPDAITIGEDVSGMPTFXIPV 300

Qy        540 EDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTNRRWLEKCVSYAESHDQALV 599

Db        301 QDGGVGFDYRLHMAIADKWIELLKKRDEDWRVGDIVHTLTNRRWSEKCVSYAESHDQALV 360

Qy        600 GDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGH 659

Db        361 GDKTIAFWLMDKDMYDFMALDRXSTSLIDRGIALHKMIRLVTMGLGGEGYLNFMGNEFGH 420

Qy        660 PEWIDFPRGDLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRY 702

Db        421 PEWIDFPRAEQHLSDGSVIPGNQFSYDKCRRRFDLGDAEYLRY 463


RESULT 8
US-09-658-499-4
; Sequence 4, Application US/09658499
; Patent No. 6469231
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/09/658,499
;  CURRENT FILING DATE:  2000-09-08
;  PRIOR APPLICATION NUMBER: 09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
;    LENGTH: 464
;    TYPE: PRT
;    ORGANISM: Unknown
;    FEATURE:
;    OTHER INFORMATION: Description of Unknown Organism:beII gene fragment (branching enz
;    OTHER INFORMATION: from Solanum tuberosum (potato)
US-09-658-499-4

  Query Match           48.5%;  Score 2204;  DB 4;  Length 464;
  Best Local Similarity   84.0%;  Pred. No. 5e-206;
  Matches  389;  Conservative   40;  Mismatches   34;  Indels    0;  Gaps    0;
```



RESULT 9
US-09-367-895-41
; Sequence 41, Application US/09367895
; Patent No. 6483009
; GENERAL INFORMATION:
; APPLICANT: POULSEN, PETER
; TITLE OF INVENTION: ANTISENSE INTRON INHIBITION OF STARCH BRANCHING ENZYME
; TITLE OF INVENTION: EXPRESSION
; FILE REFERENCE: 078883/0112
; CURRENT APPLICATION NUMBER: US/09/367,895
; CURRENT FILING DATE: 1999-12-08
; PRIOR APPLICATION NUMBER: PCT/IB98/00270
; PRIOR FILING DATE: 1998-02-23
; PRIOR APPLICATION NUMBER: GB/9703663.6
; PRIOR FILING DATE: 1997-02-21
; PRIOR APPLICATION NUMBER: GB/9706060.2
; PRIOR FILING DATE: 1997-03-24
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 41
; LENGTH: 906
; TYPE: PRT
; ORGANISM: Solanum tuberosum
US-09-367-895-41

Query Match 48.2%; Score 2192.5; DB 4; Length 906;
Best Local Similarity 50.2%; Pred. No. 2.1e-204;
Matches 428; Conservative 125; Mismatches 197; Indels 103; Gaps 15;





RESULT 10
US-08-941-445A-17
; Sequence 17, Application US/08941445A
; Patent No. 6107060
; GENERAL INFORMATION:
; APPLICANT: Keeling, Peter
; APPLICANT: Guan, Hanping
; TITLE OF INVENTION: Starch Encapsulation
; NUMBER OF SEQUENCES: 37
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Greenlee, Winner and Sullivan, P.C.
; STREET: 5370 Manhattan Circle
; CITY: Boulder
; STATE: CO
; COUNTRY: US
; ZIP: 80303
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:

```
;      APPLICATION NUMBER:  US/08/941,445A
;      FILING DATE:  30-SEP-1997
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/026,855
;      FILING DATE:  30-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Winner, Ellen P
;      REGISTRATION NUMBER:  28,547
;      REFERENCE/DOCKET NUMBER:  89-97
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 499-8080
;      TELEFAX:  (303) 499-8089
;  INFORMATION FOR SEQ ID NO:  17:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 822 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-941-445A-17

  Query Match             46.7%;  Score 2124;  DB 3;  Length 822;
  Best Local Similarity   56.1%;  Pred. No. 8.6e-198;
  Matches  389;  Conservative  112;  Mismatches  167;  Indels   26;  Gaps    6;

Qy        146 IYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREW 205
              |||:|| |  |: |  ||  ::   :  |:: |||||::||:|| ||| : :| |  ||||
Db         84 IYDLDPKLEIFKDHFRYRMKRFLEQKGSIEENEGSLESFSKGYLKFGINTNEDGTVYREW 143

Qy        206 APGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 265
              || |  | ||||||:||     | ::: ||| | : ::  | | ||| |:|| |
Db        144 APAAQEAELIGDFNDWNGANHKMEKDKFGVWSIKI-DHVKGKPAIPHNSKVKFRFLHGGV 202

Qy        266 NKDSIPAWIKFSVQAPGEL--PYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSS 323
              | ||| |:::     :   ||:|:::|||  |:| ||:|:| :| : ||||:|||||
Db        203 WVDRIPALIRYATVDASKFGAPYDGVHWDPPASERYTFKHPRPSKPAAPRIYEAHVGMSG 262

Qy        324 TEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDD 383
              :| ::||  | |:|||||:   || |||||: |||||||||||||||:| ||| |||:|
Db        263 EKPAVSTYREFADNVLPRIRANNYNTVQLMAVMEHSYYASFGYHVTNFFAVSSRSGTPED 322

Qy        384 LKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFD---GTDGHYFHSGPRGHHWMWDSR 440
              || |:|||| ||| ||||:|||||| |  |||| :|    |  |||:| ||:| :||||
Db        323 LKYLVDKAHSLGLRVLMDVVHSHASNNVTDGLNGYDVGQSTQESYFHAGDRGYHKLWDSR 382

Qy        441 LFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYAT 500
              |||| :|||||||||| |:|||: ||||||||||:| |||: | ||||| |||   |
Db        383 LFNYANWEVLRFLLSNLRYWLDEFMFDGFRFDGVTSMLYHHHGINVGFTGNYQEYFSLDT 442

Qy        501 DVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVE 560
              ||||||:|| | ::| | |||  : ||||||| :| ||::|||||||| ||: |:|::
Db        443 AVDAVVYMMLANHLMHKLLPEATVVAEDVSGMPVLCRPVDEGGVGFDYRLAMAIPDRWID 502

Qy        561 IIQKRDE-DWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMAL 619
              :: :|: :| ||:| | |||||: |||::|||||||::|||||||| ||||:||  |:
Db        503 YLKNKDDSEWSMGEIAHTLTNRRYTEKCIAYAESHDQSIVGDKTIAFLLMDKEMYTGMSD 562

Qy        620 DRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVP 679
              :|::| ||||:|| |||  ||| |||:||||||||||||||||
Db        563 LQPASPTIDRGIALQKMIHFITMALGGDGYLNFMGNEFGHPEWIDFPR----------E 611

Qy        680 GNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRII 739
              |||:|||||::  | :: |||   |  ||||:  |:| : ||::  | :|  :: :::|
Db        612 GNNWSYDKCRRQWSLVDTDHLRYKYMNAFDQAMNALDERFSFLSSSKQIVSDMNDEEKVI 671

Qy        740 VFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSF-- 797
              |||||:||||||||   :|  |:|||  ||||:: ||||  :||| ||: || :||:
Db        672 VFERGDLVFVFNFHPKKTYEGYKVGCDLPGKYRVALDSDALVFGGHGRVGHDVDHFTSPE 731

Qy        798 ------EGWYDNRPRSFMVYTPCRTAVVYALVED 825
                    |  ::||| || | :| || | |  |::
Db        732 GVPGVPETNFNNRPNSFKVLSPPRTCVAYYRVDE 765
```

```
RESULT 11
US-09-731-166-14
; Sequence 14, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
;  APPLICANT:  Sewalt, Vincent J. H.
;  APPLICANT:  Singletary, George W.
;  TITLE OF INVENTION:  Production of Modified Polysaccarides
;  FILE REFERENCE:  35718/206348
;  CURRENT APPLICATION NUMBER: US/09/731,166
;  CURRENT FILING DATE:  2000-12-06
;  PRIOR APPLICATION NUMBER:  60/169,993
;  PRIOR FILING DATE:  1999-12-06
;  NUMBER OF SEQ ID NOS:  16
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 822
;   TYPE: PRT
;   ORGANISM: Zea mays
US-09-731-166-14

  Query Match             46.7%;  Score 2124;  DB 4;  Length 822;
  Best Local Similarity   56.1%;  Pred. No. 8.6e-198;
  Matches  389;  Conservative  112;  Mismatches  167;  Indels   26;  Gaps    6;

Qy        146 IYDIDPSLTGFRQHLDYRYSQYKRLREEIDKYEGSLDAFSRGYEKFGFSRSETGITYREW 205
              |||:|| |  |: |  ||  ::   :  |:: |||||::||:|| ||| : :| |  ||||
Db         84 IYDLDPKLEIFKDHFRYRMKRFLEQKGSIEENEGSLESFSKGYLKFGINTNEDGTVYREW 143

Qy        206 APGATWAALIGDFNNWNPNADVMTQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSG 265
              || |  | ||||||:||     | ::: ||| | : ::  | | ||| |:|| |
Db        144 APAAQEAELIGDFNDWNGANHKMEKDKFGVWSIKI-DHVKGKPAIPHNSKVKFRFLHGGV 202

Qy        266 NKDSIPAWIKFSVQAPGEL--PYNGIYYDPPEEEKYVFKNPQPKRPKSLRIYESHVGMSS 323
              | ||| |:::     :   ||:|:::|||  |:| ||:|:| :| : ||||:|||||
Db        203 WVDRIPALIRYATVDASKFGAPYDGVHWDPPASERYTFKHPRPSKPAAPRIYEAHVGMSG 262

Qy        324 TEPVINTYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDD 383
              :| ::||  | |:|||||:   || |||||: |||||||||||||||:| ||| |||:|
Db        263 EKPAVSTYREFADNVLPRIRANNYNTVQLMAVMEHSYYASFGYHVTNFFAVSSRSGTPED 322

Qy        384 LKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFD---GTDGHYFHSGPRGHHWMWDSR 440
              || |:|||| ||| ||||:|||||| |  |||| :|    |  |||:| ||:| :||||
Db        323 LKYLVDKAHSLGLRVLMDVVHSHASNNVTDGLNGYDVGQSTQESYFHAGDRGYHKLWDSR 382

Qy        441 LFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYAT 500
              |||| :|||||||||| |:|||: ||||||||||:| |||: | ||||| |||   |
Db        383 LFNYANWEVLRFLLSNLRYWLDEFMFDGFRFDGVTSMLYHHHGINVGFTGNYQEYFSLDT 442

Qy        501 DVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVE 560
              ||||||:|| | ::| | |||  : ||||||| :| ||::|||||||| ||: |:|::
Db        443 AVDAVVYMMLANHLMHKLLPEATVVAEDVSGMPVLCRPVDEGGVGFDYRLAMAIPDRWID 502

Qy        561 IIQKRDE-DWKMGDIVHMLTNRRWLEKCVSYAESHDQALVGDKTIAFWLMDKDMYDFMAL 619
              :: :|: :| ||:| | |||||: |||::|||||||::|||||||| ||||:||  |:
Db        503 YLKNKDDSEWSMGEIAHTLTNRRYTEKCIAYAESHDQSIVGDKTIAFLLMDKEMYTGMSD 562

Qy        620 DRPSTPLIDRGVALHKMIRLITMGLGGEGYLNFMGNEFGHPEWIDFPRGDLHLPSGKFVP 679
              :|::| ||||:|| |||  ||| |||:||||||||||||||||
Db        563 LQPASPTIDRGIALQKMIHFITMALGGDGYLNFMGNEFGHPEWIDFPR----------E 611

Qy        680 GNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHLEEAYGFMTSEHQYISRKDERDRII 739
              |||:|||||::  | :: |||   |  ||||:  |:| : ||::  | :|  :: :::|
Db        612 GNNWSYDKCRRQWSLVDTDHLRYKYMNAFDQAMNALDERFSFLSSSKQIVSDMNDEEKVI 671

Qy        740 VFERGNLVFVFNFHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFGRLSHDAEHFSF-- 797
              |||||:||||||||   :|  |:|||  ||||:: ||||  :||| ||: || :||:
Db        672 VFERGDLVFVFNFHPKKTYEGYKVGCDLPGKYRVALDSDALVFGGHGRVGHDVDHFTSPE 731

Qy        798 ------EGWYDNRPRSFMVYTPCRTAVVYALVED 825
                    |  ::||| || | :| || | |  |::
Db        732 GVPGVPETNFNNRPNSFKVLSPPRTCVAYYRVDE 765
```

```
RESULT 12
US-08-104-158-2
; Sequence 2, Application US/08104158
; Patent No. 6215042
;  GENERAL INFORMATION:
;    APPLICANT:  Willmitzer, Lothar
;    APPLICANT:  Sonnewald, Uwe
;    APPLICANT:  Kossmann, Jens
;    APPLICANT:  Mueller-Roeber, Bernd
;    APPLICANT:  Visser, Richard Gerardus Francisus
;    APPLICANT:  Jacobsen, Evert
;    TITLE OF INVENTION:  PLASMIDS CONTAINING DNA-SEQUENCES THAT
;    TITLE OF INVENTION:  CAUSE CHANGES IN THE CARBOHYDRATE CONCENTRATION AND THE
;    TITLE OF INVENTION:  CARBOHYDRATE COMPOSITION IN PLANTS, AS WELL AS PLANT CELLS
;    TITLE OF INVENTION:  AND PLANTS CONTAINING THESE PLASMIDS
;    NUMBER OF SEQUENCES:  2
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Ostrolenk, Faber, Gerb & Soffen
;      STREET:  1180 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  U.S.A.
;      ZIP:  10036-8403
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/104,158
;      FILING DATE:  13-AUG-1993
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP PCT/EP92/00302
;      FILING DATE:  11-FEB-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  DE P 41 04 782.6
;      FILING DATE:  13-FEB-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meilman, Edward A.
;      REGISTRATION NUMBER:  24,735
;      REFERENCE/DOCKET NUMBER:  FA-1996 PCT (951-91)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  212-382-0700
;      TELEFAX:  212-382-0888
;      TELEX:  236925
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  566 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-104-158-2

  Query Match             36.0%;  Score 1635.5;  DB 3;  Length 566;
  Best Local Similarity   52.2%;  Pred. No. 2.1e-150;
  Matches  316;  Conservative   89;  Mismatches  151;  Indels   49;  Gaps    9;

Qy         57 SSNVMVTASKRVLPDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDDKIVEDEVNK 116
              | ::  |    ||  | |:: :||:             | ||||                |
Db          4 SWDISSTPKSRVRKDERMK-HSSAI-----------SAVLTD-------------DNS 36

Qy        117 ESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREEIDK 176
                :| | |:   ||               : ::||:|  :  |  :|  :|   :  |:|
Db         37 TMAPLEEDVNTENIG-------------LLNLDPTLEPYLDHFRHRMKRYVDQKMLIEK 82

Qy        177 YEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNECGVW 236
                ||| |: |::|| ||||:|  :  | |||||| |  | :|||||  | :  :| ::: |||
Db         83 YEGPLEEFAQGYLKFGFNREDGCIVYREWAPAAQEAEVIGDFNGRNGSNHMMEKDQFGVW 142

Qy        237 EIFLPNNADGSPPIPHGSRVKIRMDTPSGN-KDSIPAWIKFSVQAPGEL--PYNGIYYDP 293
              | :| : |  | ||| |||| |    :|   | ||||||::     :   ||:|:|:||
Db        143 SIRIP-DVDSKPVIPHNSRVKFRFKHGNGVWVDRIPAWIKYATADATKFAAPYDGVYWDP 201

Qy        294 PEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLM 353
              |  |:| || |:| :|:: |||||:|||||:|| :|:|  | |||||||    || ||||
Db        202 PPSERYHFKYPRPPKPRAPRIYEAHVGMSSSEPRVNSYREFADDVLPRIKANNYNTVQLM 261

Qy        354 AIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLD 413
              || ||||| |||||||||:| |:|:|  |:||| |||||| ||| ||:|:|||||| |  |
Db        262 AIMEHSYYGSFGYHVTNFFAVSNRYGNPEDLKYLIDKAHSLGLQVLVDVVHSHASNNVTD 321

Qy        414 GLNMFD---GTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFR 470
              ||| ||   |:   |||:| ||:| :|||||||| :|||||||||| ||||:|| |||||
Db        322 GLNGFDIGQGSQESYFHAGERGYHKLWDSRLFNYANWEVLRFLLSNLRWWLEEYNFDGFR 381

Qy        471 FDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVS 530
              |||:|||:| |||: : |||||||||  ||||||||||| |::|| :||:|  | ||||
Db        382 FDGITSMLYVHHGINMGFTGNYNEYFSEATDVDAVVYLMLANNLIHKIFPDATVIAEDVS 441

Qy        531 GMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQ-KRDEDWKMGDIVHMLTNRRWLEKCVS 589
              ||| :  || :||:|||||| ||: |||:: :: | |||| | ::   |||||: |||::
Db        442 GMPGLSRPVSEGGIGFDYRLAMAIPDKWIDYLKNKNDEDWSMKEVTSSLTNRRYTEKCIA 501

Qy        590 YAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGY 649
              |||||||::|||||||| ||:|:||  |:    ::|::| |:|| |||     |||  |
Db        502 YAESHDQSIVGDKTIAFLLMNKEMYSGMSCLTDASPVVDAGIALDKMIHFFHNGLGRRGV 561

Qy        650 LNFMG 654
                | |
Db        562 PQFHG 566


RESULT 13
US-09-609-040-2
; Sequence 2, Application US/09609040
; Patent No. 6570066
; GENERAL INFORMATION:
;  APPLICANT: Willmitzer, et al.
;  TITLE OF INVENTION: NUCLEOTIDE SEQUENCES ENCODING ENZYMES THAT ALTER THE CARBOHYDRATE
;  TITLE OF INVENTION:  CONCENTRATION AND COMPOSITION IN PLANTS
;  FILE REFERENCE: 514413-3515.1
;  CURRENT APPLICATION NUMBER: US/09/609,040
;  CURRENT FILING DATE:  2000-06-30
;  PRIOR APPLICATION NUMBER: PCT/EP92/00302
;  PRIOR FILING DATE: 1992-02-11
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
;   LENGTH: 566
;   TYPE: PRT
;   ORGANISM: Solanum tuberosum
US-09-609-040-2

  Query Match             36.0%;  Score 1635.5;  DB 4;  Length 566;
  Best Local Similarity   52.2%;  Pred. No. 2.1e-150;
  Matches  316;  Conservative   89;  Mismatches  151;  Indels   49;  Gaps    9;

Qy         57 SSNVMVTASKRVLPDGRIECYSSSTDQLEAPGTVSEESQVLTDVESLIMDDKIVEDEVNK 116
              | ::  |    ||  | |:: :||:             | ||||                |
Db          4 SWDISSTPKSRVRKDERMK-HSSAI-----------SAVLTD-------------DNS 36

Qy        117 ESVPMRETVSIRKIGSKPRSIPPPGRGQRIYDIDPSLTGFRQHLDYRYSQYKRLREEIDK 176
                :| | |:   ||               : ::||:|  :  |  :|  :|   :  |:|
Db         37 TMAPLEEDVNTENIG-------------LLNLDPTLEPYLDHFRHRMKRYVDQKMLIEK 82

Qy        177 YEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQNECGVW 236
                ||| |: |::|| ||||:|  :  | |||||| |  | :|||||  | :  :| ::: |||
Db         83 YEGPLEEFAQGYLKFGFNREDGCIVYREWAPAAQEAEVIGDFNGRNGSNHMMEKDQFGVW 142

Qy        237 EIFLPNNADGSPPIPHGSRVKIRMDTPSGN-KDSIPAWIKFSVQAPGEL--PYNGIYYDP 293
              | :| : |  | ||| |||| |    :|   | ||||||::     :   ||:|:|:||
Db        143 SIRIP-DVDSKPVIPHNSRVKFRFKHGNGVWVDRIPAWIKYATADATKFAAPYDGVYWDP 201
```

```
Qy        294 PEEEKYVFKNPQPKRPKSLRIYESHVGMSSTEPVINTYANFRDDVLPRIKKLGYNAVQLM 353
Db        202 PPSERYHFKYPRPPKPRAPRIYEAHVGMSSSEPRVNSYREFADDVLPRIKANNYNTVQLM 261

Qy        354 AIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLD 413
Db        262 AIMEHSYYGSFGYHVTNFFAVSNRYGNPEDLKYLIDKAHSLGLQVLVDVVHSHASNNVTD 321

Qy        414 GLNMFD---GTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFR 470
Db        322 GLNGFDIGQGSQESYFHAGERGYHKLWDSRLFNYANWEVLRFLLSNLRWWLEEYNFDGFR 381

Qy        471 FDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVS 530
Db        382 FDGITSMLYVHHGINMGFTGNYNEYFSEATDVDAVVYLMLANNLIHKIFPDATVIAEDVS 441

Qy        531 GMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQ-KRDEDWKMGDIVHMLTNRRWLEKCVS 589
Db        442 GMPGLSRPVSEGGIGFDYRLAMAIPDKWIDYLKNKNDEDWSMKEVTSSLTNRRYTEKCIA 501

Qy        590 YAESHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEGY 649
Db        502 YAESHDQSIVGDKTIAFLLMNKEMYSGMSCLTDASPVVDAGIALDKMIHFFHNGLGRRGV 561

Qy        650 LNFMG 654
Db        562 PQFHG 566
```

RESULT 14
US-09-579-365-2
; Sequence 2, Application US/09579365
; Patent No. 6566585
; GENERAL INFORMATION:
; APPLICANT: Martin QUANZ
; TITLE OF INVENTION: GENETICALLY MODIFIED PLANT CELLS, AND PLANTS WITH AN
; TITLE OF INVENTION: INCREASED ACTIVITY OF AN AMYLOSUCRASE PROTEIN AND A
; TITLE OF INVENTION: BRANCHING ENZYME
; FILE REFERENCE: 0147-0200P
; CURRENT APPLICATION NUMBER: US/09/579,365
; CURRENT FILING DATE: 2000-05-25
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 762
; TYPE: PRT
; ORGANISM: Neisseria denitrificans
US-09-579-365-2

Query Match 12.7%; Score 576; DB 4; Length 762;
Best Local Similarity 26.8%; Pred. No. 8.4e-47;
Matches 186; Conservative 108; Mismatches 223; Indels 178; Gaps 33;

```
Qy        170 LREEIDKYEGS----LDAFSRG-------YEKFGFSRSE---TGITYREWAPGATWAAL 214
Db        105 VREEDDYRFGSALQHTDAWLLGEGTHLRPYETLGAHFAEMDGVSGVRFAVWAPNARRVSV 164

Qy        215 IGDFNNWNPNADVM---TQNECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIP 271
Db        165 IGEFNGWDSRRHAMRPHTGN--GLWDIFIPG-------------------------VGLN 197

Qy        272 AWIKFSV-QAPGEL-----PY--------------NGIYYDPPEEEKYVFKNPQPKRPKS 311
Db        198 ALYKFSVLDANGNIREKADPYAFGAELRPTTASVVRGL---PAKAEAPAFRRRANSVEAP 254

Qy        312 LRIYESHVGMSSTEPVIN---TYANFRDDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHV 368
Db        255 ISIYEVHLGSWRRNPENNYWLTYTQLADELVNYVKDMGFTHIELLPLSEYPFDGSWGYQA 314

Qy        369 TNFYAASSRFGTPDDLKSLIDKAHELGLLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHS 428
Db        315 TGLYAPTSRFGSPDELKALIDAAHAAGISVILDWVAGHFPTDD-HGLNTFDGT-ALYEHA 372
```

```
Qy        429 GPR-GHHWMWDSRLFNYGSWEVLRFLLSNARWWLDEYKFDGFRFDGVTSMMYTHHGLQVD 487
Db        373 DPREGYHQDWNTLIYNFGRNEVKNFLQGNALYWIERFGFDGIRVDAVASMIYRNYSRK-- 430

Qy        488 FTGNY--NEYFGYATDVDAVVYLMLLNDMIHGLFPEAVTIGEDVSGMPTVCIPVEDGGVG 545
Db        431 -DGEWIPNRY-GGSENLEAIAFLRQTNAVLKSETPGAGSFAEESTSFADV---TREAGLN 485

Qy        546 FDYRLHMAVADKWVEIIQKRDEDWKMGDIVHMLTN--RRWLEKCVSYAE------SHDQA 597
Db        486 FDFKWNMGWMNDTLRYMQE--------DPVHRKYHHGKMTFGMMYQYSENFVLPLSHDEV 537

Qy        598 LVGDKTIA------FWLMDKDM---YDFMALDRPSTPLIDRGVALHKMIRLITMGLGGEG 648
Db        538 VHGKRSLLGKMPGDCWQQFANLRAYYGFM-----------------------YGFPGKK 573

Qy        649 YLNFMGNEFGH-PEWIDFPRG-DLHLPSGKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQ 706
Db        574 LL-FMGNEFAQGREW-NYQEGLDWHL-------------------LDEAGGWH---KGVQ 609

Qy        707 EFDQAIQHLEEAY----------GFMTSEHQYISRKDERDRIIVFER----GNLVFVFN 751
Db        610 DYVRDLNHIYTAHAPLYQLDQQPEGF-----EWLVADDSDNSVFVFERRDRAGNRIIVIS 664

Qy        752 FHWTSSYSDYRVGCLKPGKYKIVLDSDDPLFGGFG 786
Db        665 NFTPVVREHYRFGVNAPGRYTEILNSDRTQYQGSG 699
```

RESULT 15
US-09-537-120-2
; Sequence 2, Application US/09537120
; Patent No. 6608018
; GENERAL INFORMATION:
; APPLICANT: No. 6608018ozymes A/S
; APPLICANT: Shinohara, Mari L.
; TITLE OF INVENTION: Polypeptides having branching enzyme activity and nucleic acids e
; TITLE OF INVENTION: same
; FILE REFERENCE: 5860.200-US
; CURRENT APPLICATION NUMBER: US/09/537,120
; CURRENT FILING DATE: 2001-08-17
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 621
; TYPE: PRT
; ORGANISM: Rhodothermus obamensis
US-09-537-120-2

Query Match 12.5%; Score 570; DB 4; Length 621;
Best Local Similarity 25.9%; Pred. No. 2.3e-46;
Matches 187; Conservative 115; Mismatches 257; Indels 162; Gaps 29;

```
Qy        172 EEIDKYEGSLDAFSRGYEKFGFSRSETGITYREWAPGATWAALIGDFNNWNPNADVMTQN 231
Db          7 EDIRRWESG--TFYDSYRKLGAHPDDEGTWFCVWAPHADGVSVLGAFNDWNPEANPLERY 64

Qy        232 ECGVWEIFLPNNADGSPPIPHGSRVKIRMDTPSGNKDSIPAWIKFSVQAPGELPYNGI-- 289
Db         65 GGGLWAGYVPGARPG-----HTYKYRIRHGFYQADKTDPYA---FAMEPPTGSPIEGLAS 116

Qy        290 --------YYDPPEEEKYVFKNPQPKRPKSL----RIYESHVG-MSSTEPVIN-TYANFR 335
Db        117 IITRLDYTWHD----DEWMRRR---KGPASLYEPVSIYEVHLGSWRHKRPGESFSYREIA 169

Qy        336 DDVLPRIKKLGYNAVQLMAIQEHSYYASFGYHVTNFYAASSRFGTPDDLKSLIDKAHELG 395
Db        170 EPLADYVQEMGFTHVELLPVMEHPYYGSWGYQVVGYYAPTFRYGSPQDLMYLIDYLHQRG 229

Qy        396 LLVLMDIVHSHASTNTLDGLNMFDGTDGHYFHSGPRGHHWMWDSRLFNYGSWEVLRFLLS 455
Db        230 IGVILDWVPSHFAADP-QGLVFFDGTTLFEYDDPKMRYHPDWGTYVFDYNKPGVRNFLIS 288
```

```
Qy        456 NARWWLDEYKFDGFRFDGVTSMMYTHHGLQVDFTGNYNEYFGYATDVDAVVYLMLLNDMI 515
Db        289 NALFWLEKYHVDGLRVDAVASMLYRDYS-RKEWTPN---IFGGRENLEAIDFIKKFNETV 344

Qy        516 HGLFPEAVTIGEDVSGMPTVCIPVEDGGVGFDYRLHMAVADKWVEIIQKRDEDWKMGDIV 575
Db        345 YLHFPEAMTIAEESTAWPGVSAPTYNNGLGFLYK------------------WNMG--- 382

Qy        576 HMLTNRRWLEKCVSYAE--------SHDQALVGDKTIAFWLMDKDMYDFMALDRPSTPLI 627
Db        383 -------WMHDTLDYIQRDPIYRKYHHDEL-----TFSLWYAFSEHY-VLPLSHDEV-VH 428

Qy        628 DRGVALHKM----------IRLITMGLGGE--GYLNFMGNEFG-HPEWIDFPRGDLHLPS 674
Db        429 GKGSLWGKMPGDDWQKAANLRLLFGHMWGHPGKKLLFMGGEFGQHHEWNHDTQLEWHLLD 488

Qy        675 GKFVPGNNYSYDKCRRRFDLGNSKHLRYHGMQEFDQAIQHL---------EEAYGFMTSE 725
Db        489 QPY----------------------HRGIQLWVCDLNHLYRTNPALWHDGPEGF---- 520

Qy        726 HQYISRKDERDRIIVFERGN----LVFVFNF------HWTSSYSDYRVGCLKPGKYKIVL 775
Db        521 -EWIDFSDRDQSVICYLRKNAGRMLLFVLNFTPVPREH-------YRVGVPIGGPWHEVL 572

Qy        776 DSDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSFMVYTPCRTAVVYALVEDEVENELEPVA 835
Db        573 NSDAVAYGGSGMGNFGRVEAVPESWH-GRPFHLELTLPPLAALI----------LEPEH 620

Qy        836 G 836
Db        621 G 621
```

Search completed: July 13, 2004, 16:08:46
Job time : 25 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: July 16, 2004, 19:45:05 ; Search time 1584 Seconds
(without alignments)
7970.882 Million cell updates/sec

Title: US-09-297-703C-28
Perfect score: 2588
Sequence: 1 ctctctaacttctcagcgaa.....attattgatcttcctatgtt 2588

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 3190992 seqs, 2439311697 residues

Total number of hits satisfying chosen parameters: 6381984

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_NA:*
1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
5: /cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
6: /cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq:*
7: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
8: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
9: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
10: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq:*
12: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq:*
13: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq2:*
14: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
15: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
17: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
18: /cgn2_6/ptodata/2/pubpna/US60_NEW_PUB.seq:*
19: /cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

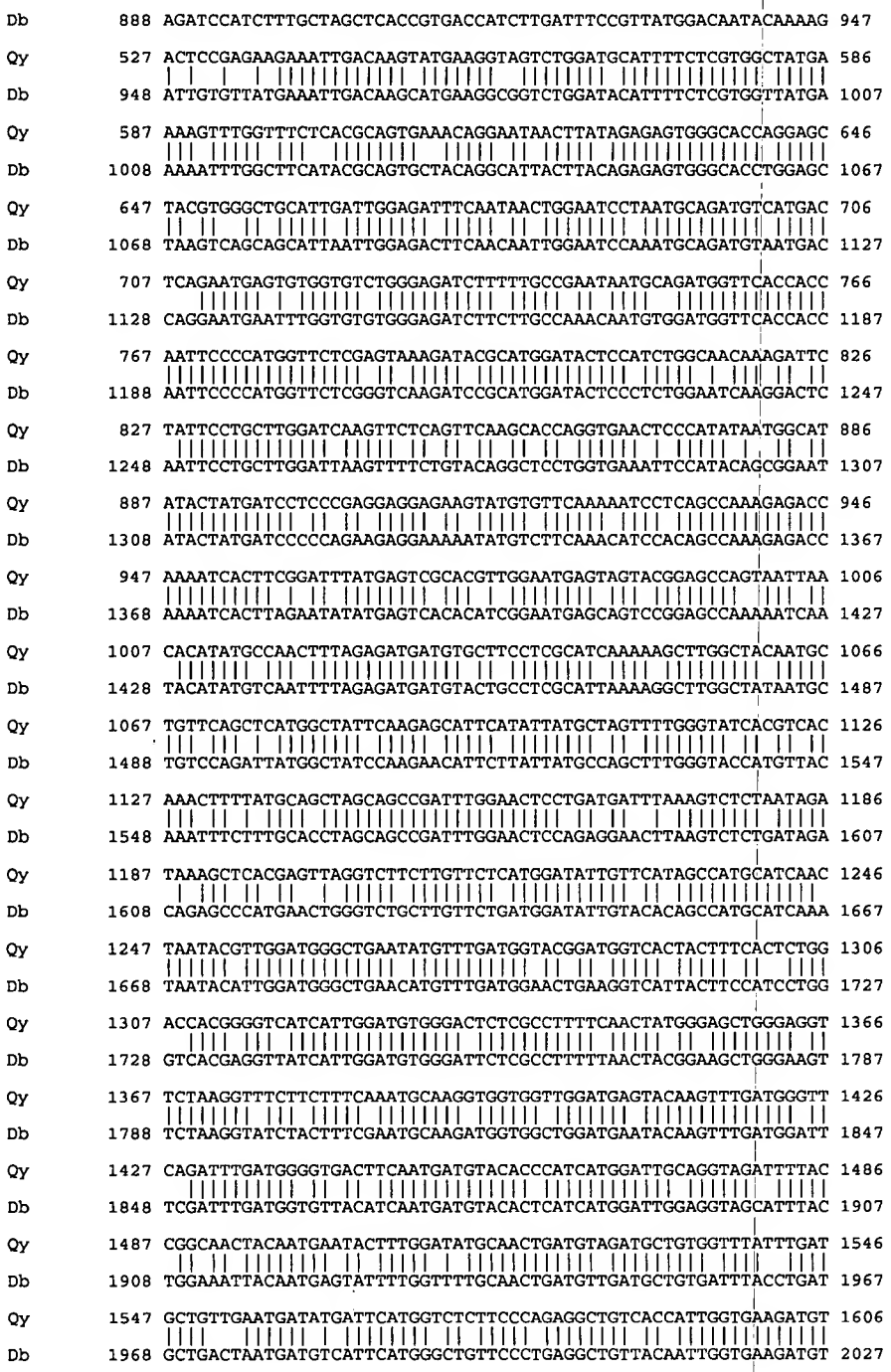
Result No.	Score	% Query Match	Length	DB	ID	Description
1	1466	56.6	5164	13	US-10-424-599-130849	Sequence 130849,
2	1392.4	53.8	2418	9	US-09-938-842A-872	Sequence 872, App
3	1392.4	53.8	2418	11	US-09-938-842A-872	Sequence 872, App
4	1382.4	53.4	3074	15	US-10-254-534-1	Sequence 1, Appli
5	1381.8	53.4	2563	13	US-10-239-145-1	Sequence 1, Appli
6	1381.2	53.4	2578	15	US-10-056-454A-19	Sequence 19, Appl
7	1380	53.3	2529	15	US-10-056-454A-17	Sequence 17, Appl
8	1377.8	53.2	3231	15	US-10-056-454A-18	Sequence 18, Appl
9	1370.4	53.0	2576	15	US-10-056-454A-16	Sequence 16, Appl
10	1364	52.7	3033	15	US-10-056-454A-14	Sequence 14, Appl
11	1360.4	52.6	2577	9	US-09-938-842A-337	Sequence 337, App
12	1360.4	52.6	2577	11	US-09-938-842A-337	Sequence 337, App
13	1357.8	52.5	3003	15	US-10-056-454A-12	Sequence 12, Appl
14	1341.2	51.8	2975	15	US-10-056-454A-13	Sequence 13, Appl
15	1307.6	50.5	3119	17	US-10-437-963-11896	Sequence 11896, A
16	1292.6	49.9	3288	17	US-10-437-963-51674	Sequence 51674, A
17	1251.8	48.4	2640	13	US-10-336-753-55	Sequence 55, Appl
18	1250	48.3	2554	13	US-10-434-893A-1	Sequence 1, Appli
19	1230.2	47.5	2559	9	US-09-792-127-1	Sequence 1, Appli
20	1230.2	47.5	3039	9	US-09-792-127-3	Sequence 3, Appli
21	1215.8	47.0	2780	13	US-10-434-893A-2	Sequence 2, Appli
22	947.4	36.6	1393	15	US-10-254-534-3	Sequence 3, Appli
23	938.6	36.3	1642	16	US-10-260-238-1027	Sequence 1027, Ap
24	840.4	32.5	1867	13	US-10-425-114-8329	Sequence 8329, Ap
25	633.4	24.5	2763	13	US-10-336-753-57	Sequence 57, Appl
26	613	23.7	3036	17	US-10-437-963-67863	Sequence 67863, A
27	594.8	23.0	2913	13	US-10-235-192A-36	Sequence 36, Appl
28	594.8	23.0	2913	13	US-10-342-887-442	Sequence 442, App
29	594.8	23.0	2913	13	US-10-172-118-442	Sequence 442, App
30	594.8	23.0	2955	9	US-09-880-107-2148	Sequence 2148, Ap
31	594.8	23.0	2955	10	US-09-918-624B-30	Sequence 30, Appl
32	594.8	23.0	2994	15	US-10-084-817-92	Sequence 92, Appl
33	594.8	23.0	3075	15	US-10-240-965-135	Sequence 135, App
34	586.8	22.7	2324	13	US-10-425-114-32172	Sequence 32172, A
35	570.8	22.1	1255	15	US-10-171-008-3	Sequence 3, Appli
36	516.2	19.9	2958	13	US-10-262-511-107	Sequence 107, App
37	509	19.7	1641	15	US-10-171-008-7	Sequence 7, Appli
38	503.2	19.4	2443	16	US-10-397-954A-1	Sequence 1, Appli
39	493.4	19.1	3753	13	US-10-239-145-6	Sequence 6, Appli
40	460.4	17.8	1267	16	US-10-260-238-3480	Sequence 3480, Ap
41	409.6	15.8	2115	16	US-10-369-493-25407	Sequence 25407, A
42	403.2	15.6	1119	16	US-10-260-238-3410	Sequence 3410, Ap
43	378.4	14.6	7320	17	US-10-221-596B-6	Sequence 6, Appli
44	374.6	14.5	1941	16	US-10-369-493-33970	Sequence 33970, A
45	370.4	14.3	636	16	US-10-260-238-5563	Sequence 5563, Ap

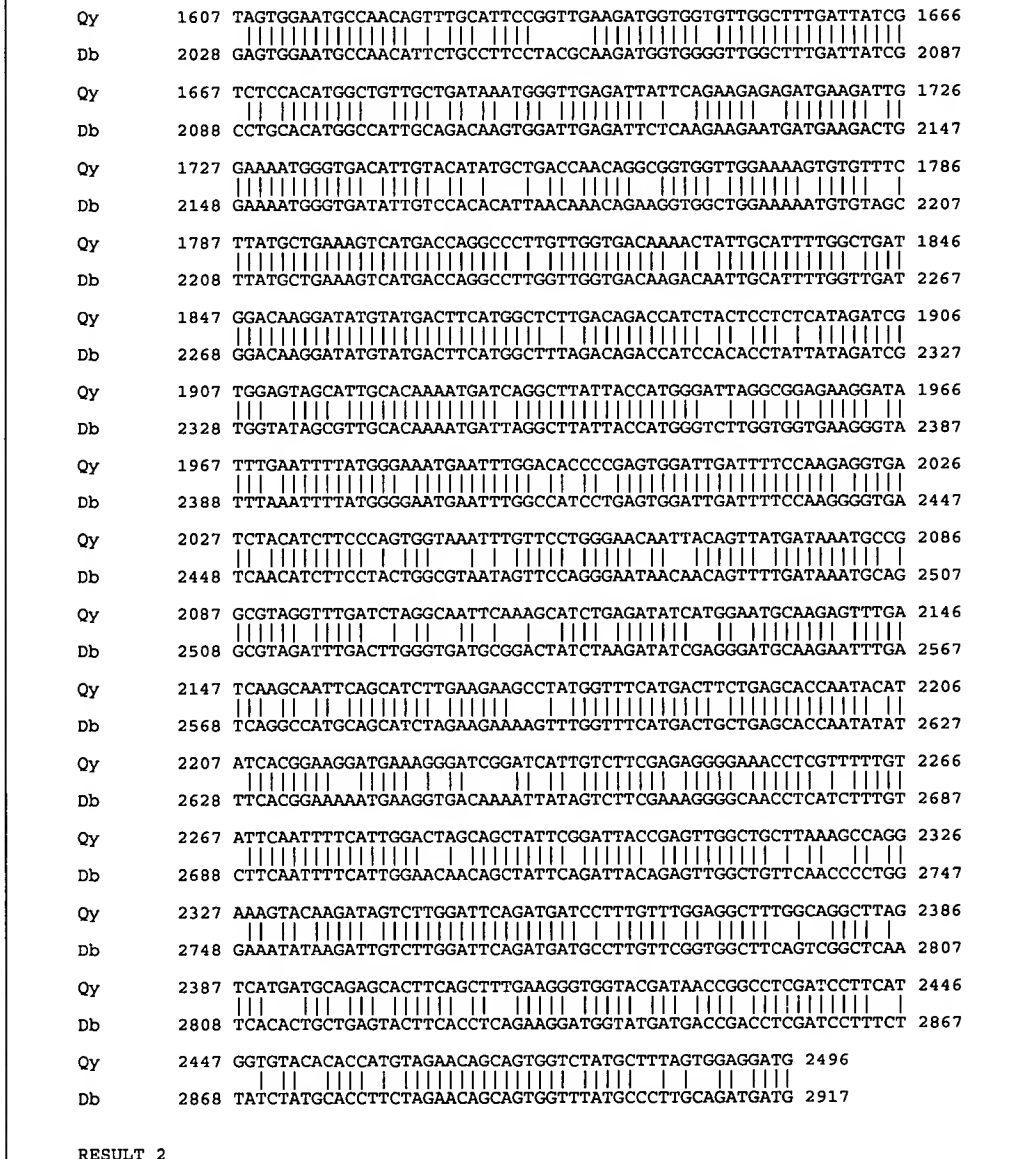
ALIGNMENTS

RESULT 1
US-10-424-599-130849
; Sequence 130849, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 130849
; LENGTH: 5164
; TYPE: DNA
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_89164C.1
US-10-424-599-130849

Query Match 56.6%; Score 1466; DB 13; Length 5164;
Best Local Similarity 80.4%; Pred. No. 0;
Matches 1729; Conservative 0; Mismatches 420; Indels 1; Gaps 1;

```
Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
              ||| |   |   |  || ||||  || ||  |  |  |   || |   |  ||   ||
Db        769 TGTGAACATTCCGGCCAAGAAAGCGTCGGTATCTGTTGGTAGGAAATCAAAGATAGTAAG 828

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
                || |  |||||| | || |||||| ||||| ||||  || || | |||||||||| ||
Db        829 TGATGAAGTTAAACCTAAGT-CATTCCCCCACCTGGCACTGGACAGAAAATATATGAGAT 887

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
              |||||||   |||  ||     ||| | || || |||| ||| |||  ||| ||||||||
```





RESULT 2
US-09-938-842A-872
; Sequence 872, Application US/09938842A
; Patent No. US20020160378A1
; GENERAL INFORMATION:
; APPLICANT: Harper, Jeff
; APPLICANT: Kreps, Joel
; APPLICANT: Wang, Xun
; APPLICANT: Zhu, Tong
; TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
; TITLE OF INVENTION: SAME, AND METHODS OF USE

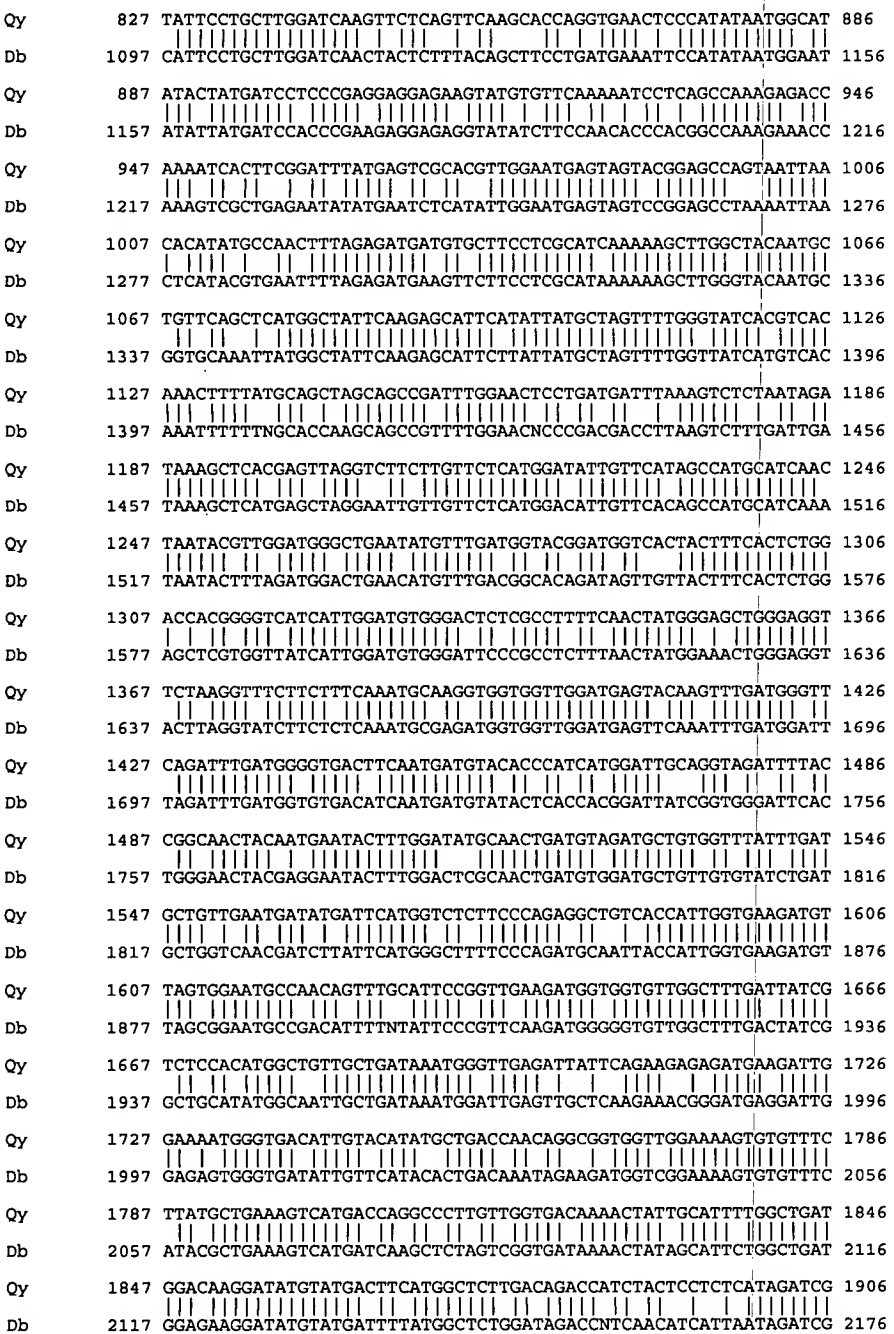
```
;  FILE REFERENCE: SCRIP1300-3
;  CURRENT APPLICATION NUMBER: US/09/938,842A
;  CURRENT FILING DATE:  2001-08-24
;  PRIOR APPLICATION NUMBER: US 60/227,866
;  PRIOR FILING DATE: 2000-08-24
;  PRIOR APPLICATION NUMBER: US 60/264,647
;  PRIOR FILING DATE: 2001-01-16
;  PRIOR APPLICATION NUMBER: US 60/300,111
;  PRIOR FILING DATE: 2001-06-22
;  NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 872
;   LENGTH: 2418
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
US-09-938-842A-872

  Query Match             53.8%;  Score 1392.4;  DB 9;  Length 2418;
  Best Local Similarity   79.0%;  Pred. No. 0;
  Matches 1657;  Conservative    0;  Mismatches  441;  Indels    0;  Gaps    0;

Qy        400 TCAGAAAAATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATAT 459
              |||  | |  ||    ||||||||     |||| ||||| ||    ||  | | ||| |
Db        317 TCAAGGAGAGAGGGGTGAAACCAAGAATAGTTCCCCCACCGGGTGATGGCAAGAAAATTT 376

Qy        460 ATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGT 519
              ||||  |||||  ||  ||    |   |       | || || ||||||||  |||  |||||
Db        377 ATGAGATAGACCCCATGTTACGAACTTACAACAATCATCTTGATTACCGTTATGGACAGT 436

Qy        520 ACAAAAGACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTG 579
              | |||||| | ||  ||  ||||| |||||||||| ||| |||| || ||||| |||||||
Db        437 ATAAAAGATTGCGTGAGGAAATAGACAAGTATGAGGGTGGTCTTGAGGCATTCTCTCGTG 496

Qy        580 GCTATGAAAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCAC 639
              |||||||||||||  || ||  ||  ||||||||   | ||  |||||||||||||||||||| |
Db        497 GCTATGAAAAGTTAGGATTTTCGCGCAGTGATGCCGGTATAACTTATAGAGAGTGGGCGC 556

Qy        640 CAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATG 699
              | |||||||  |    ||  ||  | ||  |||||||||| |||||||| ||||||||||
Db        557 CTGGAGCTAAGGCTGCATCACTTATCGGAGATTTCAACAACTGGAATTCTAATGCAGATA 616

Qy        700 TCATGACTCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTT 759
              |||||||||  |||||| | |||||| |||||||||||||||||| ||  ||   | |||||||
Db        617 TCATGACTCGGAATGAATTTGGTGTTTGGGAGATCTTTTTGCCCAACAACACTGATGGTT 676

Qy        760 CACCACCAATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACA 819
              | ||  ||||||| ||||| || || |||||||| || ||||||||||||||||||  |
Db        677 CGCCTGCAATTCCTCATGGCTCACGTGTAAAGATTCGTATGGATACTCCATCTGGCATTA 736

Qy        820 AAGATTCTATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATA 879
              ||||  || |||||||||||||||||||||||| || ||||| |||||||| ||||||  |
Db        737 AAGACTCAATTCCTGCTTGGATCAAGTTCTCGGTGCAAGCTCCAGGTGAAATCCCATTCA 796

Qy        880 ATGGCATATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAA 939
              |||||||||||||||||||||| || ||||||||||||| |||||| |||||||  ||||
Db        797 ATGGCATATACTATGATCCTCCAGAAGAGGAGAAGTATGTATTCAAACATCCTCAACCAA 856

Qy        940 AGAGACCAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAG 999
              |||||||  || || ||  ||||||||||   | || |||||  |||||||| |||||  |||
Db        857 AGAGACCTAAGTCGCTAAGGATTTATGAAGCACATGTTGGCATGAGTAGCACGGAACCAA 916

Qy       1000 TAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCT 1059
              |  | || ||  |||||  ||||||||||||||||| |||||  ||||||||||||||| |
Db        917 TGGTCAATACGTATGCTAACTTTAGAGATGATGTTCTTCCCCGCATCAAAAAGCTTGGAT 976

Qy       1060 ACAATGCTGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATC 1119
              | ||||||||||  | |||||  || |||||  |||||||||||||| || |||||||  |
Db        977 ATAATGCTGTTCAAATTATGGCCATACAAGAACATTCATATTATGCCAGCTTTGGGTACC 1036

Qy       1120 ACGTCACAAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTC 1179
              | ||||||||||||| |||  | |||||  || | |||  || ||  ||  ||  |||| || |
Db       1037 ATGTCACAAACTTTTTTGCCCCAAGCAGTCGCTGTGGGACCCCAGAGGAACTAAAATCAC 1096

Qy       1180 TAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATG 1239
              | |||||||| |||||||||||||||  ||  | |||||  ||||||||  |||||||||||||
Db       1097 TGATAGATAGAGCTCACGAGTTAGGCCTGGTAGTTCTGATGGATATCGTTCATAGCCATG 1156

Qy       1240 CATCAACTAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTC 1299
              | ||||  ||  ||  |||||||| |||||  |||||||||||  ||  ||||  ||||
Db       1157 CTTCAAAAAACACATTGGATGGACTGAACATGTTTGATGGAACTGATGCTCACTATTTTC 1216

Qy       1300 ACTCTGGACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCT 1359
              |||||||||  |||||  | ||||||||||||||  ||  ||  |||||||| ||||||||||
Db       1217 ACTCTGGACCTCGGGGATACCATTGGATGTGGGATTCACGACTTTTCAATTATGGGAGCT 1276

Qy       1360 GGGAGGTTCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTG 1419
              ||||  ||   ||  | |  ||| ||||||||||| |||||||  | ||  ||  ||||||||||
Db       1277 GGGAAGTATTACGATATCTCCTTTCAAATGCACGGTGGTGGCTAGAAGAATACAAGTTTG 1336

Qy       1420 ATGGGTTCAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAG 1479
              ||||  ||  ||||||||||||  ||  ||  ||||||||||  ||  |||||||||  |   ||| |
Db       1337 ATGGATTTAGATTTGATGGTGTAACCTCAATGATGTATACTCATCATGGACTCTCGGTTG 1396

Qy       1480 ATTTTACCGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTT 1539
                |||||  ||  |||||||  ||||||||||||  | |||||||| |||||||||  ||
Db       1397 GATTTACTGGGAACTACACCGAATACTTTGGATTGGAAACTGATGTGGATGCTGTGAATT 1456

Qy       1540 ATTTGATGCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTG 1599
              || | ||||||  | |||||||||||||||||  |||| |||  ||  ||  | |||  ||||||
Db       1457 ATCTCATGCTGGTTAATGATATGATTCATGGGCTCTACCCTGAAGCGATTACCGTTGGTG 1516

Qy       1600 AAGATGTTAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTG 1659
              ||||||||||||  ||||||||||  | ||  ||||  ||  ||||||||||  |||| ||||
Db       1517 AAGATGTTAGTGGTATGCCAACATTCTGTATTCCTGTCCAAGATGGTGGCGTTGGATTTG 1576

Qy       1660 ATTATCGTCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATG 1719
              | || |||  | ||||||||  | ||||||||  |||  | ||  ||  |  ||||||||||||
Db       1577 ACTACCGTTTACACATGGCCATAGCTGATAAGTGGATAGAAATGCTCAAGAAGAGAGATG 1636

Qy       1720 AAGATTGGAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGT 1779
              |||| |||  |||||||  |||||  |  |  |  || ||||||||  ||||||  || ||||
Db       1637 AAGACTGGCAAATGGGCGACATCATTTACACACTTACCAACAGAAGGTGGTCAGAGAAGT 1696

Qy       1780 GTGTTTCTTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTT 1839
              || | ||||||||||||||||||  || || ||  ||||||||||  |||||  |||| || |
Db       1697 GTATCTCTTATGCTGAAAGTCACGATCAAGCTCTTGTTGGTGATAAAACAATTGCCTTCT 1756

Qy       1840 GGCTGATGGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCA 1899
              || | |||||||||||||||||||  |||||||  | ||||||||||  |||||||| |
Db       1757 GGTTAATGGACAAGGATATGTATGATTTCATGGCAGTAGACAGACCATCAACTCCTCTTA 1816

Qy       1900 TAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAG 1959
              | ||| | ||| |||| |||||||||||||| |||||||| || ||||||||||||||  |
Db       1817 TCGATAGAGGAATAGCTTTGCACAAAATGATTAGGCTTATAACTATGGGATTAGGCGGTG 1876

Qy       1960 AAGGATATTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAA 2019
              |||| || || |||||||||||||||| ||||| ||||| || || ||||||||||||| |
Db       1877 AAGGTTACTTAAATTTTATGGGAAACGAATTCGGACATCCAGAATGGATTGATTTTCCCA 1936

Qy       2020 GAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATA 2079
              |||| || |  | |||| |   |||||   | |||||| |||||| |||||||||  |
Db       1937 GAGGCGAGCAGCGTCTTTCTGATGGTAGCGTGATTCCTGGCAACAATTTCAGTTATGACA 1996

Qy       2080 AATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAG 2139
              ||||||| || || |||||||| ||  || || |  |||| ||||| |  ||| | ||||
Db       1997 AATGCCGCCGCAGATTTGATCTTGGGGATGCAGATTATCTCAGATACCGCGGACTACAAG 2056

Qy       2140 AGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACC 2199
              | |||||||| ||||| || ||||||||||     || ||||| |||||||| ||||||||
Db       2057 AATTTGATCAGGCAATGCAACATCTTGAAGAGAATTACGGTTTTATGACTTCGGAGCACC 2116

Qy       2200 AATACATATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCG 2259
              ||| |||||||| || || |||  ||| |  | || || ||||| || ||  | ||||
Db       2117 AATTCATATCACGAAAAGACGAAGCAGATAGAGTAATCGTATTCGAAAGAGGTGATCTCG 2176

Qy       2260 TTTTTGTATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAA 2319
              | ||||| || || ||||| ||||| |||||||| |  ||||||||  |||| ||||  |
```

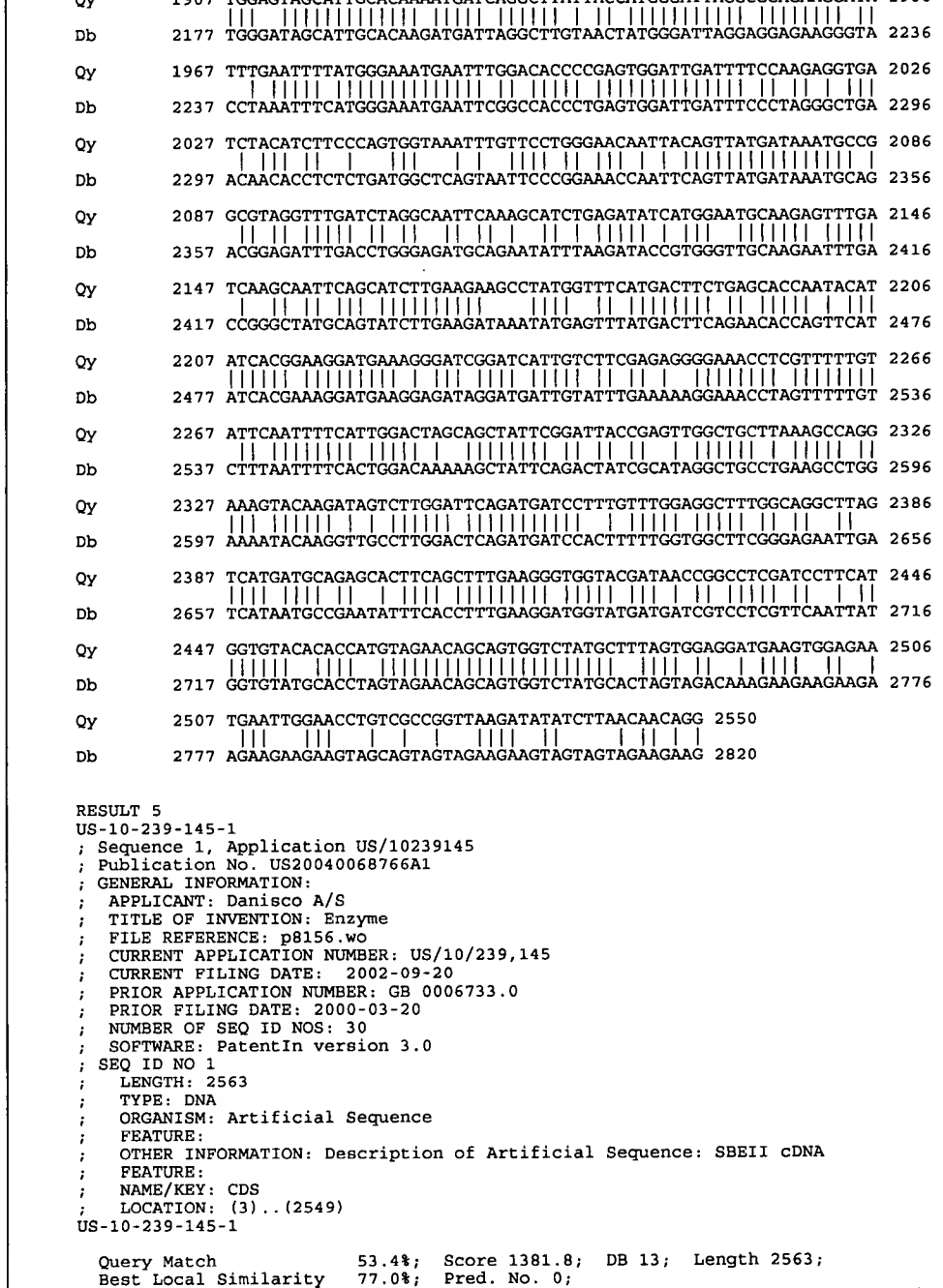
```
Db       2177 TCTTTGTCTTTAACTTTCACTGGACCAGCAGCTACTTTGATTACCGCATTGGTTGCTCCA 2236

Qy       2320 AGCCAGGAAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCA 2379

Db       2237 AGCCTGGAAAATATAAGATCGTATTGGACTCGGACGATCCTCTCTTTGGTGGATTCAATA 2296

Qy       2380 GGCTTAGTCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGAT 2439

Db       2297 GGCTCGATCGCAAGGCAGAGTACTTCACTTATGATGGCTTATACGACGAACGACCCTGCT 2356

Qy       2440 CCTTCATGGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGA 2497

Db       2357 CCTTCATGGTCTATGCACCGTGTAGAACCGCCGTGGTTTATGCTTTAGCAAACCACGA 2414


RESULT 3
US-09-938-842A-872
; Sequence 872, Application US/09938842A
; Publication No. US20040009476A9
; GENERAL INFORMATION:
;  APPLICANT: Harper, Jeff
;  APPLICANT:  Kreps, Joel
;  APPLICANT:  Wang, Xun
;  APPLICANT:  Zhu, Tong
;  TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
;  TITLE OF INVENTION:  SAME, AND METHODS OF USE
;  FILE REFERENCE: SCRIP1300-3
;  CURRENT APPLICATION NUMBER: US/09/938,842A
;  CURRENT FILING DATE:  2001-08-24
;  PRIOR APPLICATION NUMBER: US 60/227,866
;  PRIOR FILING DATE: 2000-08-24
;  PRIOR APPLICATION NUMBER: US 60/264,647
;  PRIOR FILING DATE: 2001-01-16
;  PRIOR APPLICATION NUMBER: US 60/300,111
;  PRIOR FILING DATE: 2001-06-22
;  NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 872
;   LENGTH: 2418
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
US-09-938-842A-872

  Query Match           53.8%;  Score 1392.4;  DB 11;  Length 2418;
  Best Local Similarity  79.0%;  Pred. No. 0;
  Matches 1657;  Conservative    0;  Mismatches  441;  Indels    0;  Gaps    0;

Qy        400 TCAGAAAAATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATAT 459

Db        317 TCAAGGAGAGAGGGGTGAAACCAAGAATAGTTCCCCCACCGGGTGATGGCAAGAAAATTT 376

Qy        460 ATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGT 519

Db        377 ATGAGATAGACCCCATGTTACGAACTTACAACAATCATCTTGATTACCGTTATGGACAGT 436

Qy        520 ACAAAAGACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTG 579

Db        437 ATAAAAGATTGCGTGAGGAAATAGACAAGTATGAGGGTGGTCTTGAGGCATTCTCTCGTG 496

Qy        580 GCTATGAAAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCAC 639

Db        497 GCTATGAAAAGTTAGGATTTTCGCGCAGTGATGCCGGTATAACTTATAGAGAGTGGGCGC 556

Qy        640 CAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATG 699

Db        557 CTGGAGCTAAGGCTGCATCACTTATCGGAGATTTCAACAACTGGAATTCTAATGCAGATA 616

Qy        700 TCATGACTCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTT 759

Db        617 TCATGACTCGGAATGAATTTGGTGTTTGGGAGATCTTTTTGCCCAACAACACTGATGGTT 676

Qy        760 CACCACCAATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACA 819

Db        677 CGCCTGCAATTCCTCATGGCTCACGTGTAAAGATTCGTATGGATACTCCATCTGGCATTA 736

Qy        820 AAGATTCTATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATA 879

Db        737 AAGACTCAATTCCTGCTTGGATCAAGTTCTCGGTGCAAGCTCCAGGTGAAATCCCATTCA 796

Qy        880 ATGGCATATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAA 939

Db        797 ATGGCATATACTATGATCCTCCAGAAGAGGAGAAGTATGTATTCAAACATCCTCAACCAA 856

Qy        940 AGAGACCAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAG 999

Db        857 AGAGACCTAAGTCGCTAAGGATTTATGAAGCACATGTTGGCATGAGTAGCACGGAACCAA 916

Qy       1000 TAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCT 1059

Db        917 TGGTCAATACGTATGCTAACTTTAGAGATGATGTTCTTCCCCGCATCAAAAAGCTTGGAT 976

Qy       1060 ACAATGCTGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATC 1119

Db        977 ATAATGCTGTTCAAATTATGGCCATACAAGAACATTCATATTATGCCAGCTTTGGGTACC 1036

Qy       1120 ACGTCACAAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTC 1179

Db       1037 ATGTCACAAACTTTTTTGCCCCAAGCAGTCGCTGTGGGACCCCAGAGGAACTAAAATCAC 1096

Qy       1180 TAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATG 1239

Db       1097 TGATAGATAGAGCTCACGAGTTAGGCCTGGTAGTTCTGATGGATATCGTTCATAGCCATG 1156

Qy       1240 CATCAACTAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTC 1299

Db       1157 CTTCAAAAAACACATTGGATGGACTGAACATGTTTGATGGAACTGATGCTCACTATTTTC 1216

Qy       1300 ACTCTGGACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCT 1359

Db       1217 ACTCTGGACCTCGGGGATACCATTGGATGTGGGATTCACGACTTTTCAATTATGGGAGCT 1276

Qy       1360 GGGAGGTTCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTG 1419

Db       1277 GGGAAGTATTACGATATCTCCTTTCAAATGCACGGTGGTGGCTAGAAGAATACAAGTTTG 1336

Qy       1420 ATGGGTTCAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAG 1479

Db       1337 ATGGATTTAGATTTGATGGTGTAACCTCAATGATGTATACTCATCATGGACTCTCGGTTG 1396

Qy       1480 ATTTTACCGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTT 1539

Db       1397 GATTTACTGGGAACTACACCGAATACTTTGGATTGGAAACTGATGTGGATGCTGTGAATT 1456

Qy       1540 ATTTGATGCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTG 1599

Db       1457 ATCTCATGCTGGTTAATGATATGATTCATGGGCTCTACCCTGAAGCGATTACCGTTGGTG 1516

Qy       1600 AAGATGTTAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTG 1659

Db       1517 AAGATGTTAGTGGTATGCCAACATTCTGTATTCCTGTCCAAGATGGTGGCGTTGGATTTG 1576

Qy       1660 ATTATCGTCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATG 1719

Db       1577 ACTACCGTTTACACATGGCCATAGCTGATAAGTGGATAGAAATGCTCAAGAAGAGAGATG 1636

Qy       1720 AAGATTGGAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGT 1779

Db       1637 AAGACTGGCAAATGGGCGACATCATTTACACACTTACCAACAGAAGGTGGTCAGAGAAGT 1696

Qy       1780 GTGTTTCTTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTT 1839

Db       1697 GTATCTCTTATGCTGAAAGTCACGATCAAGCTCTTGTTGGTGATAAAACAATTGCCTTCT 1756

Qy       1840 GGCTGATGGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCA 1899

Db       1757 GGTTAATGGACAAGGATATGTATGATTTCATGGCAGTAGACAGACCATCAACTCCTCTTA 1816
```

```
Qy       1900 TAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAG 1959
             | ||| | ||| |||| |||||||||||||| |||||||| || ||||||||||||| |
Db       1817 TCGATAGAGGAATAGCTTTGCACAAAATGATTAGGCTTATAACTATGGGATTAGGCGGTG 1876

Qy       1960 AAGGATATTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAA 2019
             |||| || || |||||||||||||| ||||| ||||| || || |||||||||||||| |
Db       1877 AAGGTTACTTAAATTTTATGGGAAACGAATTCGGACATCCAGAATGGATTGATTTTCCCA 1936

Qy       2020 GAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATA 2079
             |||| || |  | |||| |   |||||   | ||||||| ||||||| ||||||||| |
Db       1937 GAGGCGAGCAGCGTCTTTCTGATGGTAGCGTGATTCCTGGCAACAATTTCAGTTATGACA 1996

Qy       2080 AATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAG 2139
             ||||||| || || |||||||| ||  || || |  |||| ||||| |  ||| | ||||
Db       1997 AATGCCGCCGCAGATTTGATCTTGGGGATGCAGATTATCTCAGATACCGCGGACTACAAG 2056

Qy       2140 AGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACC 2199
             | |||||||| ||||| || ||||||||||     || ||||| |||||||| |||||||
Db       2057 AATTTGATCAGGCAATGCAACATCTTGAAGAGAATTACGGTTTTATGACTTCGGAGCACC 2116

Qy       2200 AATACATATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCG 2259
             ||| |||||||||| || || |||   ||| |  | || || ||||| || ||  | ||||
Db       2117 AATTCATATCACGAAAAGACGAAGCAGATAGAGTAATCGTATTCGAAAGAGGTGATCTCG 2176

Qy       2260 TTTTTGTATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAA 2319
             | ||||| || || ||||| ||||| |||||||| |  |||||||  |||| ||||  |
Db       2177 TCTTTGTCTTTAACTTTCACTGGACCAGCAGCTACTTTGATTACCGCATTGGTTGCTCCA 2236

Qy       2320 AGCCAGGAAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCA 2379
             |||| ||||| || ||||| || ||||| || || |||||| | ||||| || ||    |
Db       2237 AGCCTGGAAAATATAAGATCGTATTGGACTCGGACGATCCTCTCTTTGGTGGATTCAATA 2296

Qy       2380 GGCTTAGTCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGAT 2439
             ||||   ||   | |||||| ||||||  | ||| || |  |||||  | || ||  | |
Db       2297 GGCTCGATCGCAAGGCAGAGTACTTCACTTATGATGGCTTATACGACGAACGACCCTGCT 2356

Qy       2440 CCTTCATGGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGA 2497
             |||||||||| ||  |||| |||||||| || ||||| ||||||||||   | | ||
Db       2357 CCTTCATGGTCTATGCACCGTGTAGAACCGCCGTGGTTTATGCTTTAGCAAACCACGA 2414
```

```
RESULT 4
US-10-254-534-1
; Sequence 1, Application US/10254534
; Publication No. US20030046730A1
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/10/254,534
;  CURRENT FILING DATE:  2002-09-26
;  PRIOR APPLICATION NUMBER: US/09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;   LENGTH: 3074
;   TYPE: DNA
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism:beII gene
;   OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
;   OTHER INFORMATION: (potato)
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (189)..(2825)
;   FEATURE:
;   NAME/KEY: sig_peptide
;   LOCATION: (189)..(332)
;   FEATURE:
;   NAME/KEY: mat_peptide
;   LOCATION: (333)..(2825)
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (92)..(2156)
;   OTHER INFORMATION: Nucleotides 92, 285, 1406, 1430, 1897 and 2156 are
;   OTHER INFORMATION: n wherein n = A, C, G or T.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (285)..(287)
;   OTHER INFORMATION: Amino acid -16 is Xaa wherein Xaa = Ile, Leu, Val
;   OTHER INFORMATION: or Phe.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1404)..(1406)
;   OTHER INFORMATION: Amino acid 358 is Xaa wherein Xaa = Leu or Phe.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1428)..(1430)
;   OTHER INFORMATION: Amino acid 366 is Xaa wherein Xaa = Thr.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1896)..(1898)
;   OTHER INFORMATION: Amino acid 522 is Xaa wherein Xaa = Tyr, Ser, Cys
;   OTHER INFORMATION: or Phe.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (2154)..(2156)
;   OTHER INFORMATION: Amino acid 608 is Xaa wherein Xaa = Pro.
US-10-254-534-1

  Query Match           53.4%;  Score 1382.4;  DB 15;  Length 3074;
  Best Local Similarity  76.6%;  Pred. No. 0;
  Matches 1689;  Conservative    0;  Mismatches  515;  Indels    0;  Gaps    0;
```

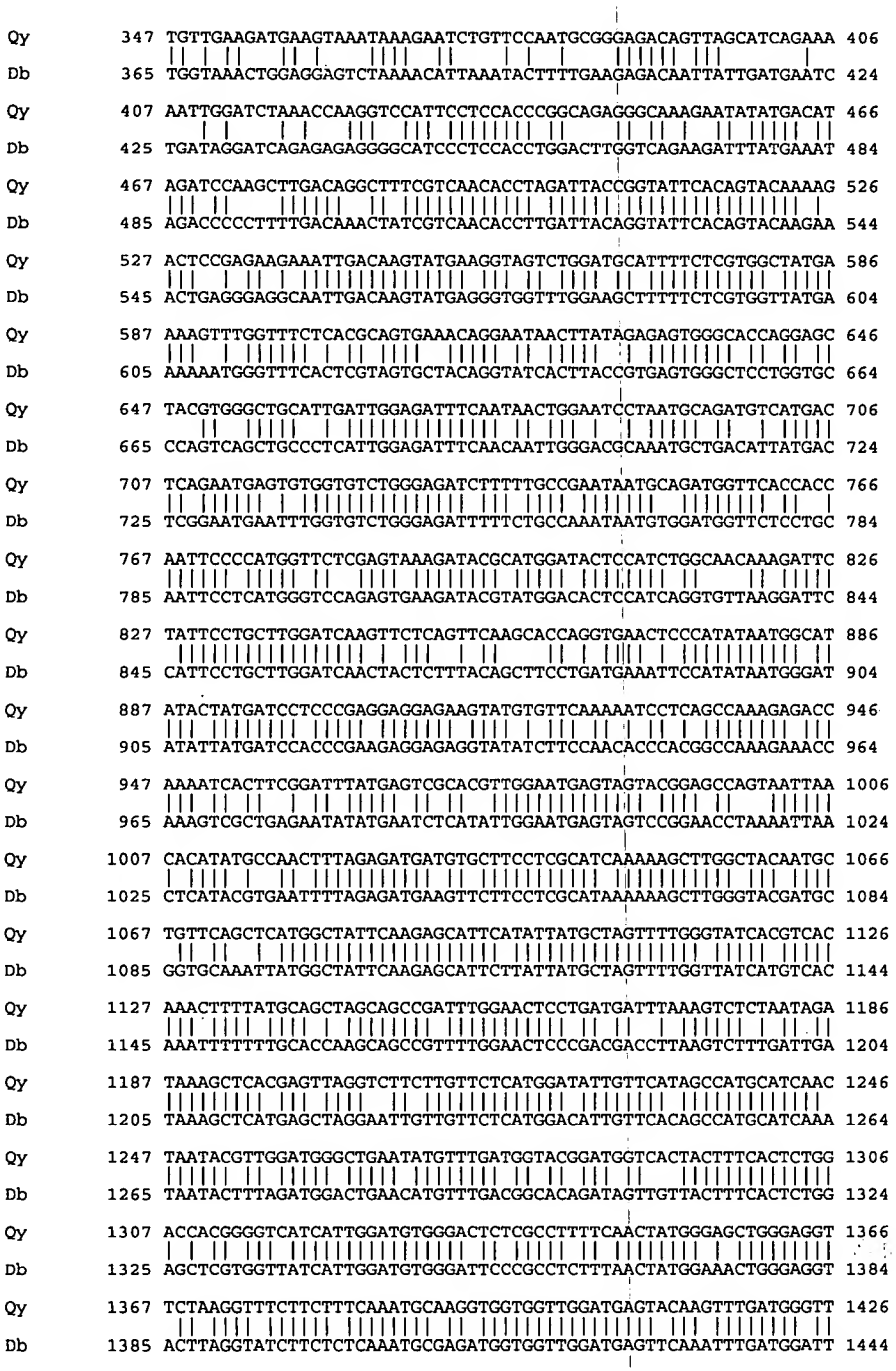
```
Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
              || | ||   || |    |||| ||    | |      |||||| |||       |
Db        617 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 676

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
                | |    | |   ||| ||| |||||||| ||    || || |  || ||||| ||
Db        677 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 736

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
              ||| ||    ||||||  || |||||||||||| |||||| |||||||||||||||| |
Db        737 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 796

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
              |||  | || | |||||||||||||||| ||| || |||| || |||||||||| |||||
Db        797 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 856

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
              |||  | |||||| | || ||||  ||||| || |||||  | |||||||| || || ||
Db        857 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 916

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
                ||  |||||  | |||||||||||||| || ||| |  | |||||  || | |||||
Db        917 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 976

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
              || |||||| | |||||||||||||| ||| |||| |||||||  |||||||| ||  |
Db        977 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 1036

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
              |||||| ||||| ||  |||| |||||||| ||||| |||||||| ||    || |||||
Db       1037 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1096
```

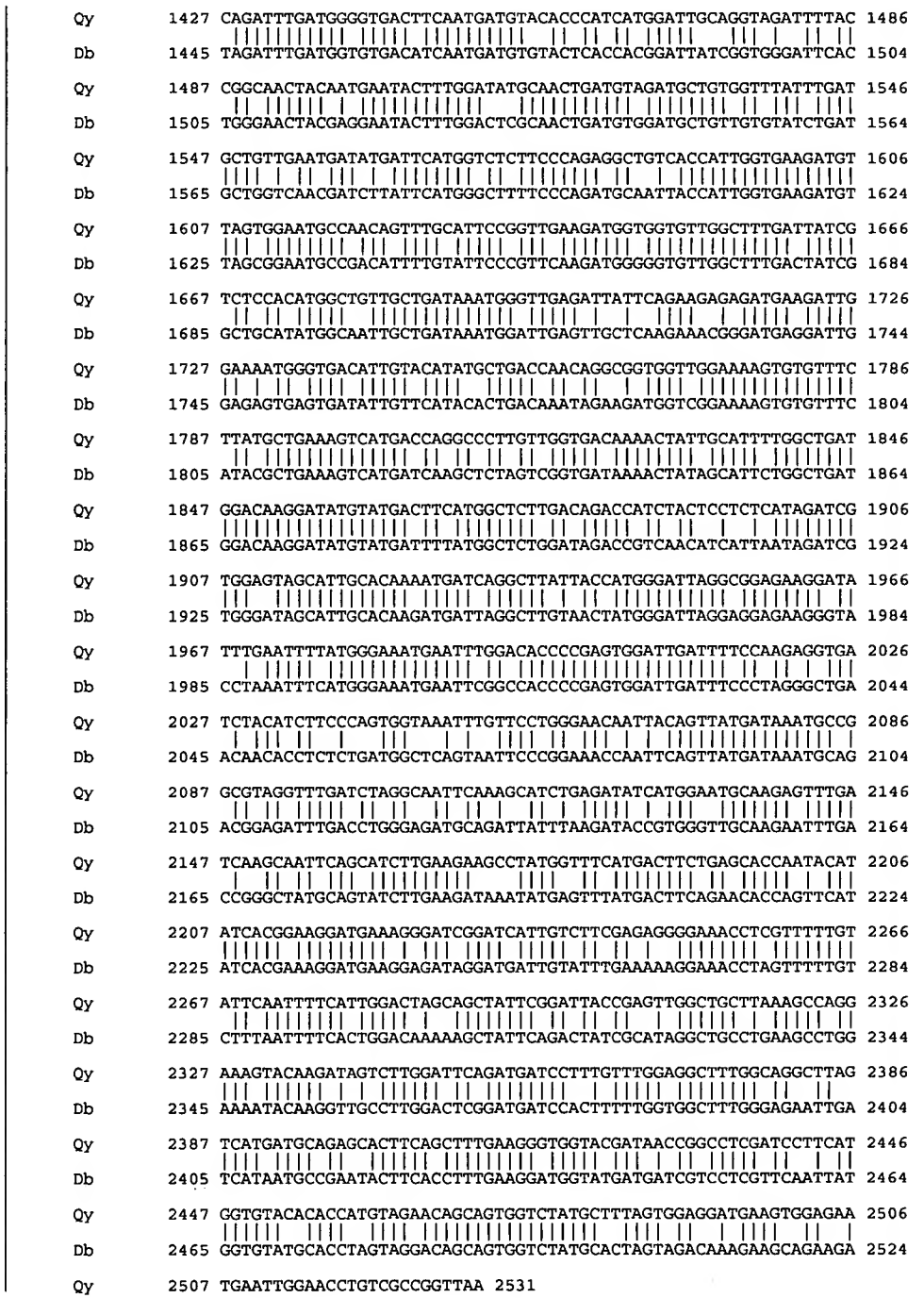




RESULT 5
US-10-239-145-1
; Sequence 1, Application US/10239145
; Publication No. US20040068766A1
; GENERAL INFORMATION:
; APPLICANT: Danisco A/S
; TITLE OF INVENTION: Enzyme
; FILE REFERENCE: p8156.wo
; CURRENT APPLICATION NUMBER: US/10/239,145
; CURRENT FILING DATE: 2002-09-20
; PRIOR APPLICATION NUMBER: GB 0006733.0
; PRIOR FILING DATE: 2000-03-20
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 2563
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: SBEII cDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (3)..(2549)
US-10-239-145-1

Query Match 53.4%; Score 1381.8; DB 13; Length 2563;
Best Local Similarity 77.0%; Pred. No. 0;
Matches 1683; Conservative 0; Mismatches 502; Indels 0; Gaps 0;





```
Db       2525 AGAAGTAGCAGTAGTAGAAGAAGAA 2549


RESULT 6
US-10-056-454A-19
; Sequence 19, Application US/10056454A
; Publication No. US20030166919A1
;  GENERAL INFORMATION:
;       APPLICANT: National Starch and Chemical Investment Holding Corporation
;       TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
;       NUMBER OF SEQUENCES: 20
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: National Starch and Chemical Investment Holding Corporation
;            STREET: 1000 Uniqema Blvd.
;            CITY: Newcastle
;            STATE: Delaware
;            COUNTRY: United States of America
;            ZIP: 19720
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/10/056,454A
;            FILING DATE: 25-Jun-2002
;  INFORMATION FOR SEQ ID NO: 19:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 2578 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       SEQUENCE DESCRIPTION: SEQ ID NO: 19:
US-10-056-454A-19 .

  Query Match          53.4%;  Score 1381.2;  DB 15;  Length 2578;
  Best Local Similarity   77.3%;  Pred. No. 0;
  Matches 1677;  Conservative    0;  Mismatches  493;  Indels    0;  Gaps    0;

Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
Db        350 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 409

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
Db        410 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 469

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
Db        470 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 529

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
Db        530 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 589

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
Db        590 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 649

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
Db        650 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 709

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
Db        710 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 769

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
Db        770 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 829

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886

Db        830 CATTCCTGCTTGGATCAACTACTCTTCACAGCTTCCTGATGAAATTCCATATAATGGAAT 889

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
Db        890 ATATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 949

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
Db        950 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1009

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
Db       1010 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAGCTTGGGTACAATGC 1069

Qy       1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
Db       1070 GGTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1129

Qy       1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
Db       1130 AAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTTGATTGA 1189

Qy       1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246
Db       1190 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAAA 1249

Qy       1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306
Db       1250 TAATACTTTAGATGGACTGAACATGTTTGACGGCACCGATAGTTGTTACTTTCACTCTGG 1309

Qy       1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366
Db       1310 AGCTCGTGGTTATCATTGGATGTGGGATTCCCGCCTTTTTAACTATGGAAACTGGGAGGT 1369

Qy       1367 TCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTT 1426
Db       1370 ACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGAGTTCAAATTTGATGGATT 1429

Qy       1427 CAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTAC 1486
Db       1430 TAGATTTGATGGTGTGACATCAATGATGTATACTCACCACGGATTATCGGTGGGATTCAC 1489

Qy       1487 CGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
Db       1490 TGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTGGATGCTGTTGTGTATCTGAT 1549

Qy       1547 GCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGT 1606
Db       1550 GCTGGTCAACGATCTTATTCATGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATGT 1609

Qy       1607 TAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCG 1666
Db       1610 TAGCGGAATGCCGACATTTTGTATTCCCGTTCAAGATGGGGGTGTTGGCTTTGACTATCG 1669

Qy       1667 TCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTG 1726
Db       1670 GCTGCATATGGCAATTGCTGATAAATGGATTGAGTTGCTCAAGAAACGGGATGAGGATTG 1729

Qy       1727 GAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTC 1786
Db       1730 GAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTTC 1789

Qy       1787 TTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGAT 1846
Db       1790 ATACGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATTCTGGCTGAT 1849

Qy       1847 GGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCG 1906
Db       1850 GGACAAGGATATGTATGATTTTATGGCTCTGGATAGACCGCCAACATCATTAATAGATCG 1909

Qy       1907 TGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATA 1966
```

```
Db       1910 TGGGATAGCATTGCACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGTA 1969

Qy       1967 TTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGA 2026

Db       1970 CCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTGA 2029

Qy       2027 TCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCG 2086

Db       2030 ACAACACCTCTCTGATGACTCAGTAATTCCCGGAAACCAATTCAGTTATGATAAATGCAG 2089

Qy       2087 GCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146

Db       2090 ACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCGTGGGTTGCAAGAATTTGA 2149

Qy       2147 TCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACAT 2206

Db       2150 CCGGGCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCAT 2209

Qy       2207 ATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266

Db       2210 ATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAAAAGGAAACCTAGTTTTTGT 2269

Qy       2267 ATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGG 2326

Db       2270 CTTTAATTTTCACTGGACAAAAAGCTATTCAGACTATCGCATAGGCTGCCTGAAGCCTGG 2329

Qy       2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAG 2386

Db       2330 AAAATACAAGGTTGCCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTGA 2389

Qy       2387 TCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCAT 2446

Db       2390 TCATAATGCCGAATATTTCACCTTTGAAGGATGGTATGATGATCGTCCTCGTTCAATTAT 2449

Qy       2447 GGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506

Db       2450 GGTGTATGCACCTTGTAGAACAGCAGTGGTCTATGCACTAGTAGACAAAGAAGAAGAAGA 2509

Qy       2507 TGAATTGGAA 2516

Db       2510 AGAAGAAGAA 2519


RESULT 7
US-10-056-454A-17
; Sequence 17, Application US/10056454A
; Publication No. US20030166919A1
;  GENERAL INFORMATION:
;       APPLICANT: National Starch and Chemical Investment Holding Corporation
;       TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
;       NUMBER OF SEQUENCES: 20
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: National Starch and Chemical Investment Holding Corporation
;            STREET: 1000 Uniqema Blvd.
;            CITY: Newcastle
;            STATE: Delaware
;            COUNTRY: United States of America
;            ZIP: 19720
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/10/056,454A
;            FILING DATE: 25-Jun-2002
;  INFORMATION FOR SEQ ID NO: 17:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 2529 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       SEQUENCE DESCRIPTION: SEQ ID NO: 17:

US-10-056-454A-17

  Query Match           53.3%;  Score 1380;  DB 15;  Length 2529;
  Best Local Similarity  76.6%;  Pred. No. 0;
  Matches 1674;  Conservative    8;  Mismatches  503;  Indels    0;  Gaps    0;

Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406

Db        343 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 402

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466

Db        403 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 462

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526

Db        463 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 522

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586

Db        523 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 582

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646

Db        583 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 642

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706

Db        643 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 702

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766

Db        703 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 762

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826

Db        763 AATTCCTCATGGGTCCAGAGTGAAGATACGYATGGACACTCCATCAGGTGTTAAGGATTC 822

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886

Db        823 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 882

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946

Db        883 ATATTATGATCCACCCGAAGAGGAGAGGTATRTCTTCCAACACCCACGGCCAAAGAAACC 942

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006

Db        943 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1002

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066

Db       1003 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAASCTTGGGTACAATGC 1062

Qy       1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126

Db       1063 GGTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1122

Qy       1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186

Db       1123 AAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTTGATTGA 1182

Qy       1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246

Db       1183 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAAA 1242

Qy       1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306

Db       1243 TAATACTTTAGATGGACTGAACATGTTTGACGGCACAGATAGTTGTTACTTTCACTCTGG 1302

Qy       1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366

Db       1303 AGCTCGTGGTTATCATTGGATGTGGGATTCCCGCCTCTTTAACTATGGAAACTGGGAGGT 1362
```

```
Qy       1367 TCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTT 1426
Db       1363 ACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGAGTTCAAATTTGATGGATT 1422

Qy       1427 CAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTAC 1486
Db       1423 TAGATTTGATGGTGTGACATCAATGATGTATACTCACCACGGATTATCGGTGGGATTCAC 1482

Qy       1487 CGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
Db       1483 TGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTGGATGCTGTTGTGTATCTGAT 1542

Qy       1547 GCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGT 1606
Db       1543 GCTGGTCAACGATCTTATTCACGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATGT 1602

Qy       1607 TAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCG 1666
Db       1603 TAGCGGAATGCCGACATTTTGTATTCCCGTTCAAGATGGGGGTGTTGGCTTTGACTATCG 1662

Qy       1667 TCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTG 1726
Db       1663 GCTGCATATGGCAATTGCTGATAAATGGATTGAGTTGCTCAAGAAACGGGATGAGGATTG 1722

Qy       1727 GAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTC 1786
Db       1723 GAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTTC 1782

Qy       1787 TTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGAT 1846
Db       1783 ATMCGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATYCTGGCTGAT 1842

Qy       1847 GGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCG 1906
Db       1843 GGACAAGGATATGTATGATTTTATGGCTCTGGATAGACCGYCAACAYCATTAATAGATCG 1902

Qy       1907 TGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATA 1966
Db       1903 TGGGATAGCATTGCACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGTA 1962

Qy       1967 TTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGA 2026
Db       1963 CCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTGA 2022

Qy       2027 TCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCG 2086
Db       2023 RCAACACCTCTCTGATGGCTCAGTAATTCCCGGAAACCAATTCAGTTATGATAAATGCAG 2082

Qy       2087 GCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146
Db       2083 ACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCATGGGTTGCAAGAATTTGA 2142

Qy       2147 TCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACAT 2206
Db       2143 CCGGGCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCAT 2202

Qy       2207 ATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266
Db       2203 ATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAARAGGAAACCTAGTTTTTGT 2262

Qy       2267 ATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGG 2326
Db       2263 CTTTAATTTTCACTGGACAAATAGCTATTCAGACTATCGCATAGGCTGCCTGAAGCCTGG 2322

Qy       2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAG 2386
Db       2323 AAAATACAAGGTTGGCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTGA 2382

Qy       2387 TCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCAT 2446
Db       2383 TCATAATGCCGAATATTTCACCTCTGAAGGATCGTATGATGATCGTCCTCGTTCAATTAT 2442

Qy       2447 GGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506
Db       2443 GGTGTATGCACCTAGTAGAACAGCAGTGGTCTATGCACTAGTAGACAAANTAGAAGNAGA 2502

Qy       2507 TGAATTGGAACCTGTCGCCGGTTAA 2531
Db       2503 AGAAGAAGAAGAANCCGNNGAAGAA 2527
```

RESULT 8
US-10-056-454A-18
; Sequence 18, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Uniqema Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/056,454A
; FILING DATE: 25-Jun-2002
; INFORMATION FOR SEQ ID NO: 18:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3231 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-10-056-454A-18

Query Match 53.2%; Score 1377.8; DB 15; Length 3231;
Best Local Similarity 76.1%; Pred. No. 0;
Matches 1694; Conservative 2; Mismatches 529; Indels 0; Gaps 0;

```
Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
Db        656 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 715

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
Db        716 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 775

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
Db        776 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 835

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
Db        836 AATGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 895

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
Db        896 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 955

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
Db        956 CCAGTCAGCTGCTCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 1015

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
Db       1016 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 1075
```

```
Qy       767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
Db      1076 AATTCCTCATGGGTCCAGAGTGAAGATACGCATGGACACTTCATCAGGTGTTAAGGATTC 1135

Qy       827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
Db      1136 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 1195

Qy       887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
Db      1196 ATATTATGATCCACCCGAAGAGGAGAGGTATGTCTTCCAACACCCACGGCCAAAGAAACC 1255

Qy       947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
Db      1256 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1315

Qy      1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
Db      1316 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAACCTTGGGTACAATGC 1375

Qy      1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
Db      1376 GGTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1435

Qy      1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
Db      1436 AAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTTGATTGA 1495

Qy      1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246
Db      1496 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAAA 1555

Qy      1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306
Db      1556 TAATACTTTAGATGGACTGAACATGTTTGACGGCACAGATAGTTGTTACTTTCACTCTGG 1615

Qy      1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366
Db      1616 AGCTCGTGGTTATCATTGGATGTGGGATTCCCGCCTCTTTAACTATGGAAACTGGGAGGT 1675

Qy      1367 TCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTT 1426
Db      1676 ACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGAGTGCAAATTTGRTGGATT 1735

Qy      1427 CAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTAC 1486
Db      1736 TAGATTTGATGGTGTGACATCAATGATGTATACTCACCACGGATTATCGGTGGGATTCAC 1795

Qy      1487 CGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
Db      1796 TGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTRGATGCTGCCGTGTATCTGAT 1855

Qy      1547 GCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGT 1606
Db      1856 GCTGGCCAACGATCTTATTCATGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATGT 1915

Qy      1607 TAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCG 1666
Db      1916 TAGCGGAATGCCGACATTTTGTATTCCCGTTCAAGATGGGGGTGTTGGCTTTGACTATCG 1975

Qy      1667 TCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTG 1726
Db      1976 GCTGCATATGGCAATTGCTGATAAATGGATTGAGTTGCTCAAGAAACGGGATGAGGATTG 2035

Qy      1727 GAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTC 1786
Db      2036 GAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTTC 2095

Qy      1787 TTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGAT 1846
Db      2096 ATACGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATTCTGGCTGAT 2155

Qy      1847 GGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCG 1906
Db      2156 GGACAAGGATATGTATGATTTTATGGCTTTGGATAGACCGTCAACATCATTAATAGATCG 2215

Qy      1907 TGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATA 1966
Db      2216 TGGGATAGCATTGCACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGTA 2275

Qy      1967 TTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGA 2026
Db      2276 CCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTGA 2335

Qy      2027 TCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCG 2086
Db      2336 ACAACACCTCTCTGATGGCTCAGTAATTCCCGGAAACCAATTCAGTTATGATAAATGCAG 2395

Qy      2087 GCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146
Db      2396 ACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCGTGGGTTGCAAGAATTTGA 2455

Qy      2147 TCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACAT 2206
Db      2456 CCGGGCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCAT 2515

Qy      2207 ATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266
Db      2516 ATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAAAAGGAAACCTAGTTTTTGT 2575

Qy      2267 ATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGG 2326
Db      2576 CTTTAATTTTCACTGGACAAAAAGCTATTCAGACTATCGCATAGGCTGGCTGAAGCCTGG 2635

Qy      2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAG 2386
Db      2636 AAAATACAAGGTTGCCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTGA 2695

Qy      2387 TCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCAT 2446
Db      2696 TCATAATGCCGAATGTTTCACCTTTGAAGGATGGTATGATGATCGTCCTCGTTCAATTAT 2755

Qy      2447 GGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506
Db      2756 GGTGTATGCACCTAGTAGAACAGCAGTGGTCTATGCACTAGTAGACAAAGAAGAAGAAGA 2815

Qy      2507 TGAATTGGAACCTGTCGCCGGTTAAGATATATCTTAACAACAGGTTCTGAAGCAGGAATG 2566
Db      2816 AGAAGAAGTAGCAGTAGTAGAAGAAGTAGTAGTAGAAGAAGAATGAACGAACTTGTGATC 2875

Qy      2567 CCATT 2571
Db      2876 GCGTT 2880
```

RESULT 9
US-10-056-454A-16
; Sequence 16, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Uniqema Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:

```
;             APPLICATION NUMBER: US/10/056,454A
;             FILING DATE: 25-Jun-2002
;   INFORMATION FOR SEQ ID NO: 16:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 2576 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        SEQUENCE DESCRIPTION: SEQ ID NO: 16:
US-10-056-454A-16

  Query Match             53.0%;  Score 1370.4;  DB 15;  Length 2576;
  Best Local Similarity   77.3%;  Pred. No. 0;
  Matches 1677;  Conservative    0;  Mismatches  491;  Indels    2;  Gaps    1;

Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
              || | ||   || |    |||| ||    | |       |||||| |||          |
Db        350 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 409

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
              | |    | |   |||  ||| |||||||| ||    || || |  || ||||| ||
Db        410 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 469

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
              ||| ||    ||||||  || |||||||||||| |||||| |||||||||||||||| |
Db        470 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 529

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
              |||  | || | |||||||||||||| ||| || |||| || |||||||||| |||||
Db        530 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 589

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
              |||  | |||||| | || ||||  ||||| || |||||  | |||||||| || || ||
Db        590 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 649

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
                ||  |||||  | |||||||||||||| || ||| |  | ||||| ||  | |||||
Db        650 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 709

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
              || |||||| | |||||||||||||| ||| |||| |||||||  |||||||| || |
Db        710 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 769

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
              ||||||  ||||| ||  |||| |||||||| ||||| |||||||| ||     || |||||
Db        770 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 829

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
              |||||||||||||||||  | |||  | ||    || | |||| | ||||||||||| ||
Db        830 CATTCCTGCTTGGATCAACTACTC--TACAGCTTCCTGATGAAATTCCATATAATGGAAT 887

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
              ||| |||||||| ||||| ||||||| |||| | ||| || | || | |||||||| |||
Db        888 ATATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 947

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
              ||| || ||  | || ||||| || ||  |||||||||||||| |||||||  | ||||||
Db        948 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1007

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
              | |||| |  || |||||||||| || |||||||||| |||||||||| ||||||||
Db       1008 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAGCTTGGGTACAATGC 1067

Qy       1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
                | ||  | |||||||||||||||||||| |||||||||||||||||| ||||| |||||
Db       1068 GCTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1127

Qy       1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
              ||| |||| |||| | |||||||| |||||||| || || ||  | |||||| || ||
Db       1128 AAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTTGATTGA 1187

Qy       1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246
              ||||||||| ||| |||| || |||||||||||| |||||||| |||||||||||||

Db       1188 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAAA 1247

Qy       1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306
              |||||| || ||||| ||||| |||||||| || || ||| ||   ||||||||||||||
Db       1248 TAATACTTTAGATGGACTGAACATGTTTGACGGCACCGATAGTTGTTACTTTCACTCTGG 1307

Qy       1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366
              | | || ||| |||||||||||||||| || |||||||| |||||||| | |||||||||
Db       1308 AGCTCGTGGTTATCATTGGATGTGGGATTCCCGCCTTTTTAACTATGGAAACTGGGAGGT 1367

Qy       1367 TCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTT 1426
              || |||| |||||| |||||||| || ||||||||||||||| ||| |||||||| ||
Db       1368 ACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGAGTTCAAATTTGATGGATT 1427

Qy       1427 CAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTAC 1486
              |||||||||| ||||| |||||||||| || || || |||||   ||| |  || ||
Db       1428 TAGATTTGATGGTGTGACATCAATGATGTATACTCACCACGGATTATCGGTGGGATTCAC 1487

Qy       1487 CGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
              || |||||| | |||||||||||    |||||||||| |||||||| || ||| ||||
Db       1488 TGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTGGATGCTGTTGTGTATCTGAT 1547

Qy       1547 GCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGT 1606
              |||| | || ||| | |||||||| || |||||||| ||  | |||||||||||||||||
Db       1548 GCTGGTCAACGATCTTATTCATGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATGT 1607

Qy       1607 TAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCG 1666
              ||| |||||||| ||| |||| ||||| ||| ||||||| |||||||||||||| |||||
Db       1608 TAGCGGAATGCCGACATTTTGTATTCCCGTTCAAGATGGGGGTGTTGGCTTTGACTATCG 1667

Qy       1667 TCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTG 1726
              || || ||||| |||||||||||||||| ||||| |  ||||  | ||||| |||||||||
Db       1668 GCTGCATATGGCAATTGCTGATAAATGGATTGAGTTGCTCAAGAAACGGGATGAGGATTG 1727

Qy       1727 GAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTC 1786
              || | ||||||| ||||| |||  ||||| || ||  | |||| |||||||||||||||
Db       1728 GAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTTC 1787

Qy       1787 TTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGAT 1846
              || |||||||||||||| || || || || ||||| |||||||| ||||| ||||||||
Db       1788 ATACGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATTCTGGCTGAT 1847

Qy       1847 GGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCG 1906
              |||||||||||||||||| || |||||||| || ||||  | ||  |  | ||||||||
Db       1848 GGACAAGGATATGTATGATTTTATGGCTCTGGATAGACCGCCAACATCATTAATAGATCG 1907

Qy       1907 TGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATA 1966
              |||  |||||||||||| ||||| |||||| | || |||||||||| |||||||| ||
Db       1908 TGGGATAGCATTGCACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGTA 1967

Qy       1967 TTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGA 2026
              | ||||| |||||||||||||| || ||||| |||||||||||||| || || | |||
Db       1968 CCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTGA 2027

Qy       2027 TCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCG 2086
              | ||| ||   |  ||    | |  |||| || ||| | |  |||||||||||||||| |
Db       2028 ACAACACCTCTCTGATGACTCAGTAATTCCCGGAAACCAATTCAGTTATGATAAATGCAG 2087

Qy       2087 GCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146
              || || ||||| || ||  || || |  || | ||||| | |||  ||||||| |||||
Db       2088 ACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCGTGGGTTGCAAGAATTTGA 2147

Qy       2147 TCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACAT 2206
              |  || || ||| ||||||||||     ||||  || |||||||| || ||||| | |||
Db       2148 CCGGGCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCAT 2207

Qy       2207 ATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266
              |||||| |||||||||| | |||| |||||| || || |  |||||||| ||||||||
Db       2208 ATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAAAAGGAAACCTAGTTTTTGT 2267

Qy       2267 ATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGG 2326
              || |||||||| ||||| |  |||||||| || || ||  | |||||| | ||||| ||
Db       2268 CTTTAATTTTCACTGGACAAAAAGCTATTCAGACTATCGCATAGGCTGCCTGAAGCCTGG 2327
```

```
Qy       2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAG 2386
             ||| |||||| | | |||||| |||||||||||  | ||||| ||||| || ||  ||
Db       2328 AAAATACAAGGTTGCCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTGA 2387

Qy       2387 TCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCAT 2446
             |||| |||| ||  | |||| |||||||| ||||| ||| | || ||||| ||  | ||
Db       2388 TCATAATGCCGAATATTTCACCTTTGAAGGATGGTATGATGATCGTCCTCGTTCAATTAT 2447

Qy       2447 GGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506
             ||||||  |||| |||||||||||||||||||||  |||| ||  | ||||  ||  |
Db       2448 GGTGTATGCACCTTGTAGAACAGCAGTGGTCTATGCACTAGTAGACAAAGAAGAAGAAGA 2507

Qy       2507 TGAATTGGAA 2516
                 |||  |||
Db       2508 AGAAGAAGAA 2517
```

RESULT 10
US-10-056-454A-14
; Sequence 14, Application US/10056454A
; Publication No. US20030166919A1
; GENERAL INFORMATION:
; APPLICANT: National Starch and Chemical Investment Holding Corporation
; TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: National Starch and Chemical Investment Holding Corporation
; STREET: 1000 Uniqema Blvd.
; CITY: Newcastle
; STATE: Delaware
; COUNTRY: United States of America
; ZIP: 19720
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/056,454A
; FILING DATE: 25-Jun-2002
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3033 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 145..2790
; SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-10-056-454A-14

Query Match 52.7%; Score 1364; DB 15; Length 3033;
Best Local Similarity 75.9%; Pred. No. 0;
Matches 1685; Conservative 0; Mismatches 535; Indels 0; Gaps 0;

```
Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
              || | ||   || |    |||| ||     | |       |||||| |||        |
Db        573 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 632

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
                |  |   | |   |||  ||| |||||||| ||    || || |  || ||||| ||
Db        633 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 692

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
              ||| ||    ||||||  || |||||||||||| |||||| ||||||||||||||||  |
Db        693 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 752

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
              |||  | || | |||||||||||||| ||| || |||| || |||||||||| |||||
Db        753 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCCTTTTCTCGTGGTTATGA 812

```
Qy   587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
              ||| | |||||| | || |||| ||||| || ||||| | |||||||| | || ||
Db   813 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCTTGGTGC 872

Qy   647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
              || ||||| | |||||||||||||| || ||| | | ||||| || | |||||
Db   873 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 932

Qy   707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
              || |||||| | |||||||||||||| ||| |||| ||||||| |||||||| || |
Db   933 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 992

Qy   767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
              |||||| ||||| || |||| |||||||| ||||| |||||||| || || |||||
Db   993 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1052

Qy   827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
              |||||||||||||||| | ||| | || || | |||| | |||||||||||| ||
Db   1053 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 1112

Qy   887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
              | | |||||||| ||||| ||||||| |||| | ||| || | || | |||||||| |||
Db   1113 ACATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 1172

Qy   947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
              ||| || || | || ||||| || || |||||||||||||| ||||||| ||||||
Db   1173 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1232

Qy   1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
              | |||| | || |||||||||| || |||||||||| |||||||||| ||||||||
Db   1233 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAGCTTGGGTACAATGC 1292

Qy   1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
                | || | ||||||||||||||||||| ||||| |||||||||| ||||| |||||
Db   1293 GCTGCAAATTATGGCTATTCAAGAGCATTCTTATTACGCTAGTTTTGGTTATCATGTCAC 1352

Qy   1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
              ||| |||| |||| | |||||||| |||||||| || || || | |||||| | || ||
Db   1353 AAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTTGATTGA 1412

Qy   1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246
              ||||||||| ||| |||| || |||||||||||| |||||||| ||||||||||||||
Db   1413 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAAA 1472

Qy   1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306
              |||||| || ||||| ||||| |||||||| | || ||| || ||||||||||||||
Db   1473 TAATACTTTAGATGGACTGAACATGTTTGACTGCACCGATAGTTGTTACTTTCACTCTGG 1532

Qy   1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366
              | | || ||| |||||||||||||||| || ||||| || |||||||| | |||||||||
Db   1533 AGCTCGTGGTTATCATTGGATGTGGGATTCCCGCCTCTTTAACTATGGAAACTGGGAGGT 1592

Qy   1367 TCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTT 1426
              || |||| |||||| |||||||| || |||||||||||| || ||| |||||||| ||
Db   1593 ACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGCGTTCAAATTTGATGGATT 1652

Qy   1427 CAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTAC 1486
              |||||||||| ||||| |||||||||| | || || ||||| ||| | || ||
Db   1653 TAGATTTGATGGTGTGACATCAATGATGTATATTCACCACGGATTATCGGTGGGATTCAC 1712

Qy   1487 CGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
              || |||||| | ||||||||||| |||||||||| |||||||| || ||| ||||
Db   1713 TGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTGGATGCTGTTGTGTATCTGAT 1772

Qy   1547 GCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGT 1606
              |||| | || ||| | |||||||| || |||||||| || | ||||||||||||||||||
Db   1773 GCTGGTCAACGATCTTATTCATGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATGT 1832

Qy   1607 TAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCG 1666
              ||| |||||||| ||| |||| ||||| || |||| || ||||||||||||||| |||||
Db   1833 TAGCGGAATGCCGACATTTTGTATTCCCGTCCAAGAGGGGGGTGTTGGCTTTGACTATCG 1892

Qy   1667 TCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTG 1726

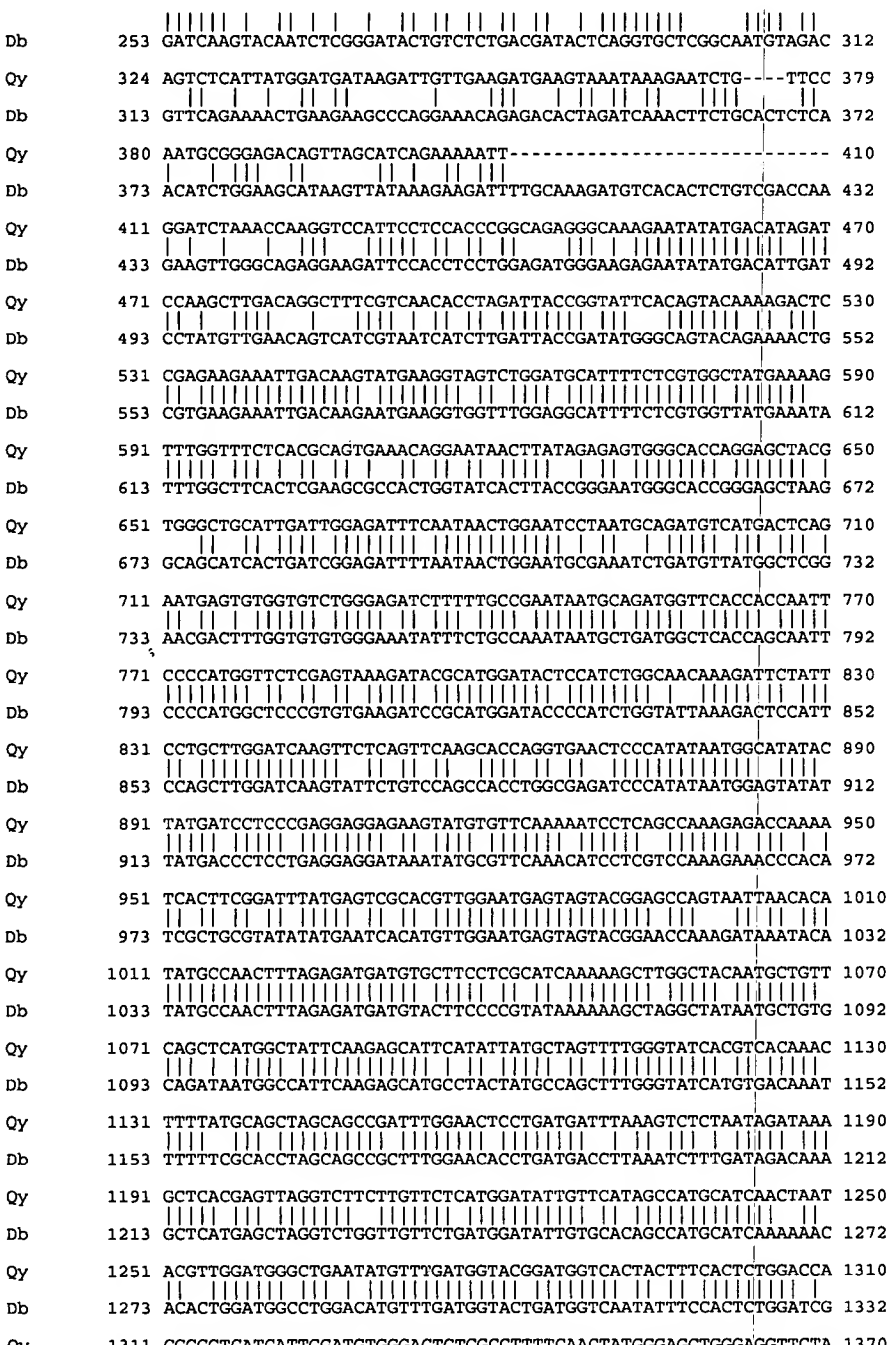
```
Db       1893 GCTGCATATGGCAATTGCTGATAAACGGATTGAGTTGCTCAAGAAACGGGATGAGGATTG 1952

Qy       1727 GAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTC 1786

Db       1953 GAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTTC 2012

Qy       1787 TTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGAT 1846

Db       2013 ATACGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATTCTGGCTGAT 2072

Qy       1847 GGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCG 1906

Db       2073 GGACAAGGATATGTATGATTTTATGGCTCTGGATAGACCGTCAACATCATTAATAGATCG 2132

Qy       1907 TGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATA 1966

Db       2133 TGGGATAGCATTGCACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGTA 2192

Qy       1967 TTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGA 2026

Db       2193 CCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTGA 2252

Qy       2027 TCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCG 2086

Db       2253 ACAACACCTCTCTGATGGCTCAGTAATCCCCGGAAACCAATTCAGTTATGATAAATGCAG 2312

Qy       2087 GCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146

Db       2313 ACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCGTGGGTTGCAAGAATTTGA 2372

Qy       2147 TCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACAT 2206

Db       2373 CCGGCCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCAT 2432

Qy       2207 ATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266

Db       2433 ATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAAAAGGAAACCTAGTTTTTGT 2492

Qy       2267 ATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGG 2326

Db       2493 CTTTAATTTTCACTGGACAAAAAGCTATTCAGACTATCGCATAGCCTGCCTGAAGCCTGG 2552

Qy       2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAG 2386

Db       2553 AAAATACAAGGTTGCCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTGA 2612

Qy       2387 TCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCAT 2446

Db       2613 TCATAATGCCGAATATTTCACCTTTGAAGGATGGTATGATGATCGTCCTCGTTCAATTAT 2672

Qy       2447 GGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506

Db       2673 GGTGTATGCACCTTGTAAAACAGCAGTGGTCTATGCACTAGTAGACAAAGAAGAAGAAGA 2732

Qy       2507 TGAATTGGAACCTGTCGCCGGTTAAGATATATCTTAACAACAGGTTCTGAAGCAGGAATG 2566

Db       2733 AGAAGAAGAAGAAGAAGAAGAAGTAGCAGCAGTAGAAGAAGTAGTAGTAGAAGAAGAATG 2792


RESULT 11
US-09-938-842A-337
; Sequence 337, Application US/09938842A
; Patent No. US20020160378A1
; GENERAL INFORMATION:
;  APPLICANT: Harper, Jeff
;  APPLICANT:  Kreps, Joel
;  APPLICANT:  Wang, Xun
;  APPLICANT:  Zhu, Tong
;  TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
;  TITLE OF INVENTION:  SAME, AND METHODS OF USE
;  FILE REFERENCE: SCRIP1300-3
;  CURRENT APPLICATION NUMBER: US/09/938,842A
;  CURRENT FILING DATE:  2001-08-24
;  PRIOR APPLICATION NUMBER: US 60/227,866
;  PRIOR FILING DATE: 2000-08-24
;  PRIOR APPLICATION NUMBER: US 60/264,647
;  PRIOR FILING DATE: 2001-01-16
;  PRIOR APPLICATION NUMBER: US 60/300,111
;  PRIOR FILING DATE: 2001-06-22
;  NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 337
;   LENGTH: 2577
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
US-09-938-842A-337

  Query Match             52.6%;  Score 1360.4;  DB 9;  Length 2577;
  Best Local Similarity   74.1%;  Pred. No. 0;
  Matches 1778;  Conservative    0;  Mismatches  586;  Indels   36;  Gaps    3;

Qy       144 TTTTCTAGGAGGGTCTTCTCTGGAAAGTCATCTCATGAATCTGACTCCTCAAATGTAATG 203

Db       136 TCTTCTGGGAAGGTTTTTGCTCGGAAGCCATCGTATGATTCTGATTCGTCTTCCTTAGCT 195

Qy       204 GTCACTGCTTCTAAAAGAGTCCTTCCTGATGGTCGGATTGAATGCTATTCTTCTTCAACA 263

Db       196 ACCACTGCATCTGAGAAGCTCCGTGGCCA---TCAGAGTGATAGCTCTTCATCTGCCTCT 252

Qy       264 GATCAATTGGAAGCCCCTGGCACAGTTTCAGAAGAATCCCAGGTGCTTACTGATGTTGAG 323

Db       253 GATCAAGTACAATCTCGGGATACTGTCTCTGACGATACTCAGGTGCTCGGCAATGTAGAC 312

Qy       324 AGTCTCATTATGGATGATAAGATTGTTGAAGATGAAGTAAATAAAGAATCTG----TTCC 379

Db       313 GTTCAGAAAACTGAAGAAGCCCAGGAAACAGAGACACTAGATCAAACTTCTGCACTCTCA 372

Qy       380 AATGCGGGAGACAGTTAGCATCAGAAAAATT---------------------------- 410

Db       373 ACATCTGGAAGCATAAGTTATAAAGAAGATTTTGCAAAGATGTCACACTCTGTCGACCAA 432

Qy       411 GGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACATAGAT 470

Db       433 GAAGTTGGGCAGAGGAAGATTCCACCTCCTGGAGATGGGAAGAGAATATATGACATTGAT 492

Qy       471 CCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAGACTC 530

Db       493 CCTATGTTGAACAGTCATCGTAATCATCTTGATTACCGATATGGGCAGTACAGAAAACTG 552

Qy       531 CGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAG 590

Db       553 CGTGAAGAAATTGACAAGAATGAAGGTGGTTTGGAGGCATTTTCTCGTGGTTATGAAATA 612

Qy       591 TTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGCTACG 650

Db       613 TTTGGCTTCACTCGAAGCGCCACTGGTATCACTTACCGGGAATGGGCACCGGGAGCTAAG 672

Qy       651 TGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGACTCAG 710

Db       673 GCAGCATCACTGATCGGAGATTTTAATAACTGGAATGCGAAATCTGATGTTATGGCTCGG 732

Qy       711 AATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACCAATT 770

Db       733 AACGACTTTGGTGTGTGGGAAATATTTCTGCCAAATAATGCTGATGGCTCACCAGCAATT 792

Qy       771 CCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTCTATT 830

Db       793 CCCCATGGCTCCCGTGTGAAGATCCGCATGGATACCCCATCTGGTATTAAAGACTCCATT 852

Qy       831 CCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCATATAC 890

Db       853 CCAGCTTGGATCAAGTATTCTGTCCAGCCACCTGGCGAGATCCCATATAATGGAGTATAT 912

Qy       891 TATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAA 950

Db       913 TATGACCCTCCTGAGGAGGATAAATATGCGTTCAAACATCCTCGTCCAAAGAAACCCACA 972
```

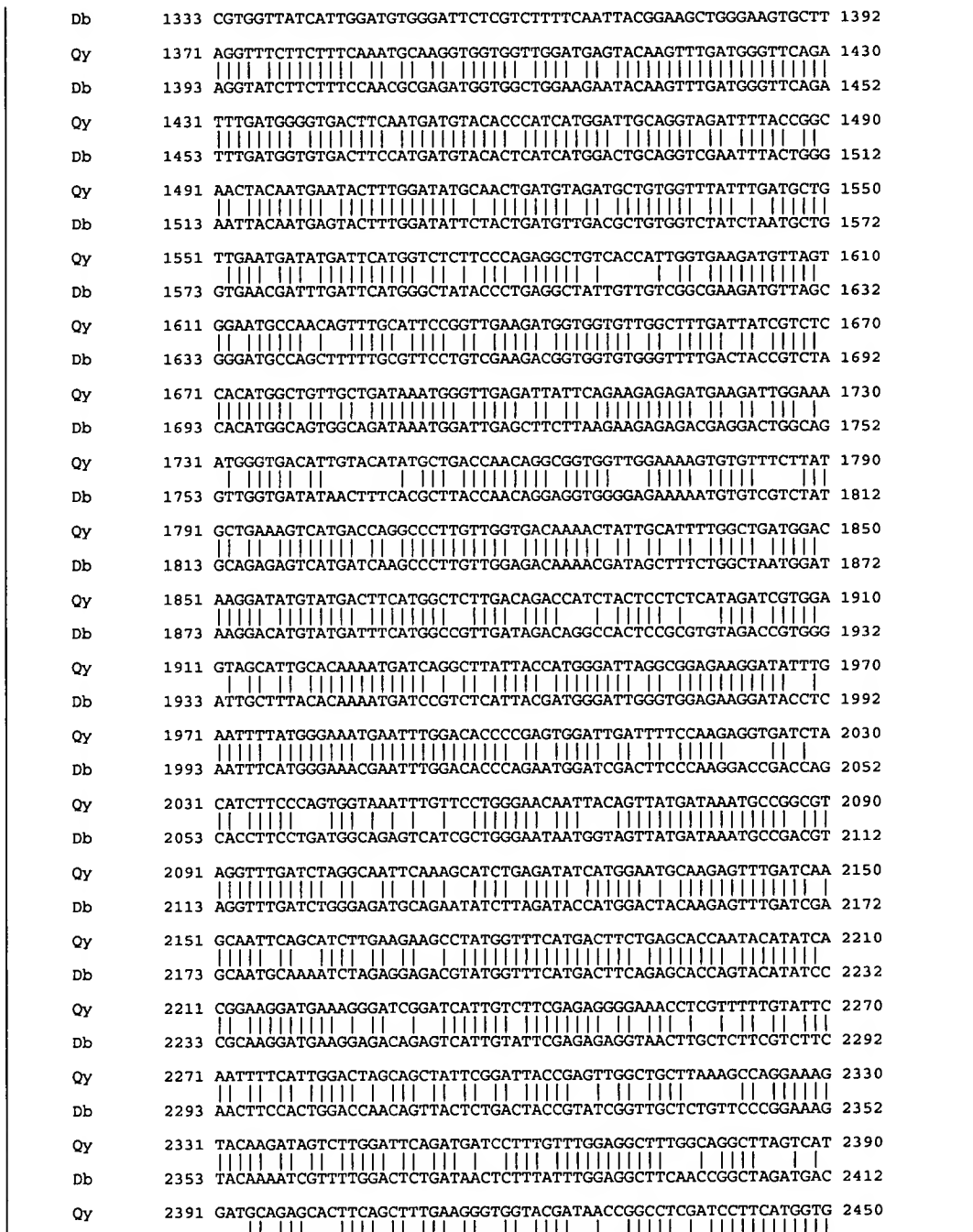
```
Qy        951 TCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAACACA 1010
              || || || || ||||| || || ||||||||||||||||||||| |||   || || |||
Db        973 TCGCTGCGTATATATGAATCACATGTTGGAATGAGTAGTACGGAACCAAAGATAAATACA 1032

Qy       1011 TATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGCTGTT 1070
              ||||||||||||||||||||| ||||| || || |||||||| ||||| ||||||||
Db       1033 TATGCCAACTTTAGAGATGATGTACTTCCCCGTATAAAAAAGCTAGGCTATAATGCTGTG 1092

Qy       1071 CAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCACAAAC 1130
              ||| | ||||| |||||||||||| | || ||||| || |||||||||| || |||||
Db       1093 CAGATAATGGCCATTCAAGAGCATGCCTACTATGCCAGCTTTGGGTATCATGTGACAAAT 1152

Qy       1131 TTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGATAAA 1190
              ||||  ||| |||||||||| |||||||| |||||||   | || ||| | ||||| |||
Db       1153 TTTTTCGCACCTAGCAGCCGCTTTGGAACACCTGATGACCTTAAATCTTTGATAGACAAA 1212

Qy       1191 GCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAACTAAT 1250
              ||||| ||| |||||||  ||||||| |||||||||| || ||||||||||||   ||
Db       1213 GCTCATGAGCTAGGTCTGGTTGTTCTGATGGATATTGTGCACAGCCATGCATCAAAAAAC 1272

Qy       1251 ACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGGACCA 1310
              ||  ||||||| ||| | |||||||||||||| |||||||| || || ||||||||| |
Db       1273 ACACTGGATGGCCTGGACATGTTTGATGGTACTGATGGTCAATATTTCCACTCTGGATCG 1332

Qy       1311 CGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTA 1370
              || ||| |||||||||||||||| ||||| |||||||| || || |||||||| || ||
Db       1333 CGTGGTTATCATTGGATGTGGGATTCTCGTCTTTTCAATTACGGAAGCTGGGAAGTGCTT 1392

Qy       1371 AGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTTCAGA 1430
              |||| ||||||||| || || || |||||| |||| || ||||||||||||||||||||
Db       1393 AGGTATCTTCTTTCCAACGCGAGATGGTGGCTGGAAGAATACAAGTTTGATGGGTTCAGA 1452

Qy       1431 TTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTACCGGC 1490
              |||||||| |||||||| |||||||||| |||||||| ||||||| || ||||| ||
Db       1453 TTTGATGGTGTGACTTCCATGATGTACACTCATCATGGACTGCAGGTCGAATTTACTGGG 1512

Qy       1491 AACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGATGCTG 1550
              || |||||||| |||||||||||| | |||||||| || |||||||| ||| | ||||||
Db       1513 AATTACAATGAGTACTTTGGATATTCTACTGATGTTGACGCTGTGGTCTATCTAATGCTG 1572

Qy       1551 TTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGTTAGT 1610
              |||| ||| |||||||||| || | ||| |||||| |    | || ||||||||||
Db       1573 GTGAACGATTTGATTCATGGGCTATACCCTGAGGCTATTGTTGTCGGCGAAGATGTTAGC 1632

Qy       1611 GGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCGTCTC 1670
              || |||||| |  ||||| |||| || ||||| |||||||| || |||| || ||||||
Db       1633 GGGATGCCAGCTTTTTGCGTTCCTGTCGAAGACGGTGGTGTGGGTTTTGACTACCGTCTA 1692

Qy       1671 CACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTGGAAA 1730
              |||||||| || || ||||||||| ||||| || || |||||||||| || || ||| |
Db       1693 CACATGGCAGTGGCAGATAAATGGATTGAGCTTCTTAAGAAGAGAGACGAGGACTGGCAG 1752

Qy       1731 ATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTAT 1790
              | ||||| ||       | ||| ||||||||| ||||| |||||| |||||     |||
Db       1753 GTTGGTGATATAACTTTCACGCTTACCAACAGGAGGTGGGGAGAAAAATGTGTCGTCTAT 1812

Qy       1791 GCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGATGGAC 1850
              || || |||||||| || |||||||||| |||||||| || || || ||||| |||||
Db       1813 GCAGAGAGTCATGATCAAGCCCTTGTTGGAGACAAAACGATAGCTTTCTGGCTAATGGAT 1872

Qy       1851 AAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCGTGGA 1910
              ||||| |||||||| |||||||| |||| ||||    | ||||| |    |||| |||||
Db       1873 AAGGACATGTATGATTTCATGGCCGTTGATAGACAGGCCACTCCGCGTGTAGACCGTGGG 1932

Qy       1911 GTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATATTTG 1970
              | || || |||||||||||| | || ||||| |||||||||| ||||||||||  |
Db       1933 ATTGCTTTACACAAAATGATCCGTCTCATTACGATGGGATTGGGTGGAGAAGGATACCTC 1992

Qy       1971 AATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGATCTA 2030
              ||||| |||||||| |||||||||||||| || ||||| ||||| |||| ||  | |
Db       1993 AATTTCATGGGAAACGAATTTGGACACCCAGAATGGATCGACTTCCCAAGGACCGACCAG 2052

Qy       2031 CATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCGGCGT 2090
              || ||||||    ||| | | |   | |||||||| |||   ||||||||||||||||| |||
Db       2053 CACCTTCCTGATGGCAGAGTCATCGCTGGGAATAATGGTAGTTATGATAAATGCCGACGT 2112

Qy       2091 AGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGATCAA 2150
              |||||||||||  ||  || ||  |  |||| ||||| |||||| | ||||||||||||| |
Db       2113 AGGTTTGATCTGGGAGATGCAGAATATCTTAGATACCATGGACTACAAGAGTTTGATCGA 2172

Qy       2151 GCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACATATCA 2210
              |||||  ||  |||| || ||  | |||||||||||||||| |||||||| ||||||||
Db       2173 GCAATGCAAAATCTAGAGGAGACGTATGGTTTCATGACTTCAGAGCACCAGTACATATCC 2232

Qy       2211 CGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGTATTC 2270
              || |||||||||  | ||  |  |||||||  |||||||| || |||  |  | || || |||
Db       2233 CGCAAGGATGAAGGAGACAGAGTCATTGTATTCGAGAGAGGTAACTTGCTCTTCGTCTTC 2292

Qy       2271 AATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGGAAAG 2330
              || || || ||||| | ||| || || || |||||  | || ||||      || ||||||
Db       2293 AACTTCCACTGGACCAACAGTTACTCTGACTACCGTATCGGTTGCTCTGTTCCCGGAAAG 2352

Qy       2331 TACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAGTCAT 2390
              ||||| || || ||||| || ||| |  |||| ||||||||||   | ||||   | |
Db       2353 TACAAAATCGTTTTGGACTCTGATAACTCTTTATTTGGAGGCTTCAACCGGCTAGATGAC 2412

Qy       2391 GATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCATGGTG 2450
                 || |||   |||| || ||| ||  || |||| |  ||||| | ||||||||||||
Db       2413 TCCGCGGAGTTTTTCACCTCTGATGGAAGGCACGACGATAGGCCTTGCTCCTTCATGGTG 2472

Qy       2451 TACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAATGAA 2510
              ||  |||| || ||||| || || || || |||  ||| || ||||| |  ||  |||||
Db       2473 TATGCACCGTGCAGAACCGCTGTAGTTTACGCTGCAGTAGATGATGATGATGATGATGAA 2532
```

RESULT 12
US-09-938-842A-337
; Sequence 337, Application US/09938842A
; Publication No. US20040009476A9
; GENERAL INFORMATION:
; APPLICANT: Harper, Jeff
; APPLICANT: Kreps, Joel
; APPLICANT: Wang, Xun
; APPLICANT: Zhu, Tong
; TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
; TITLE OF INVENTION: SAME, AND METHODS OF USE
; FILE REFERENCE: SCRIP1300-3
; CURRENT APPLICATION NUMBER: US/09/938,842A
; CURRENT FILING DATE: 2001-08-24
; PRIOR APPLICATION NUMBER: US 60/227,866
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: US 60/264,647
; PRIOR FILING DATE: 2001-01-16
; PRIOR APPLICATION NUMBER: US 60/300,111
; PRIOR FILING DATE: 2001-06-22
; NUMBER OF SEQ ID NOS: 5379
; SEQ ID NO 337
; LENGTH: 2577
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-938-842A-337

Query Match 52.6%; Score 1360.4; DB 11; Length 2577;
Best Local Similarity 74.1%; Pred. No. 0;
Matches 1778; Conservative 0; Mismatches 586; Indels 36; Gaps 3;

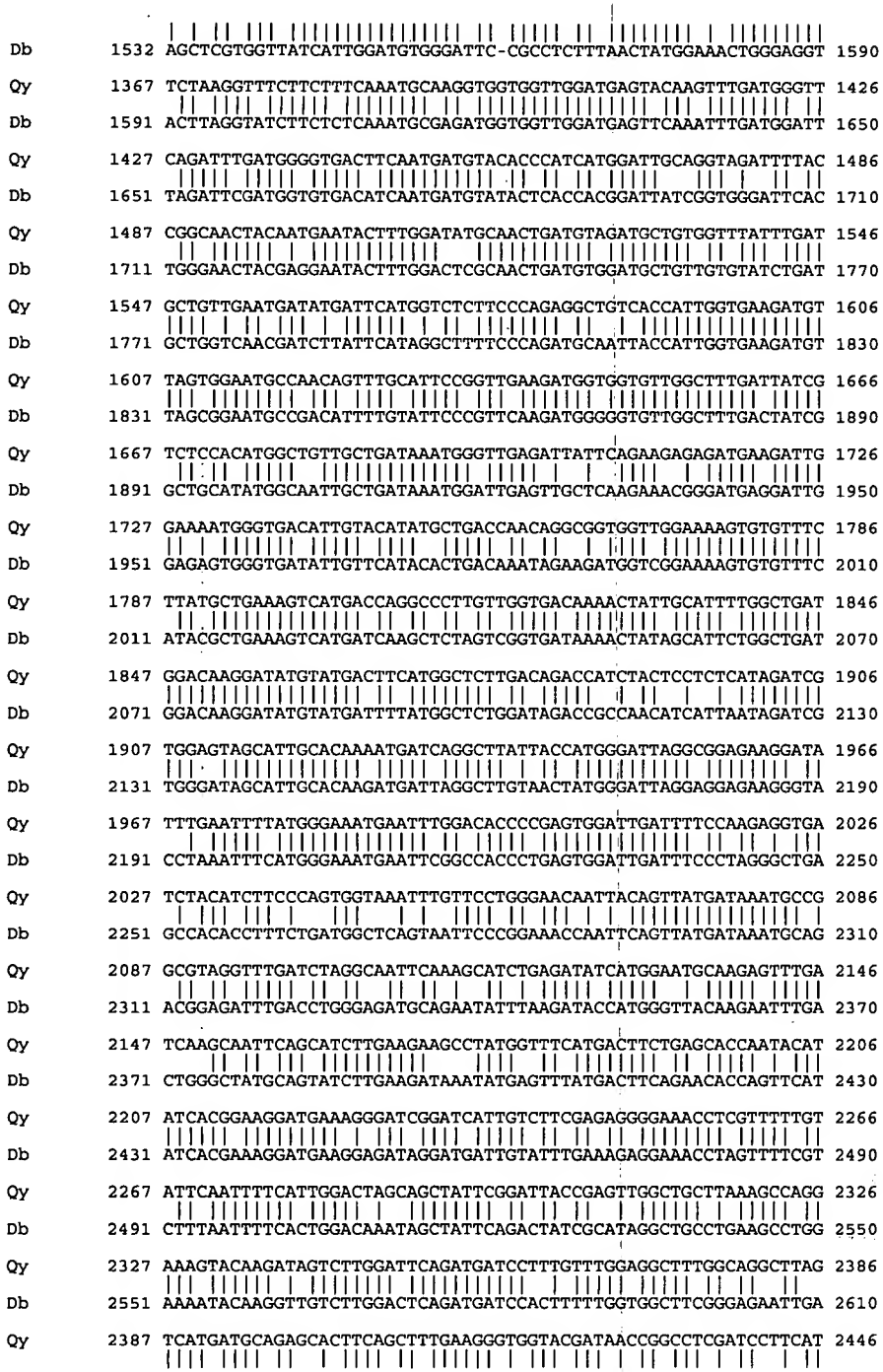
```
Qy        144 TTTTCTAGGAGGGTCTTCTCTGGAAAGTCATCTCATGAATCTGACTCCTCAAATGTAATG 203
              | |||| ||| ||| ||  || | ||| |||| |||| ||||| || ||      ||
Db        136 TCTTCTGGGAAGGTTTTTGCTCGGAAGCCATCGTATGATTCTGATTCGTCTTCCTTAGCT 195

Qy        204 GTCACTGCTTCTAAAAGAGTCCTTCCTGATGGTCGGATTGAATGCTATTCTTCTTCAACA 263
                ||||| ||| | |   ||| |    |   || || |||  ||| ||| ||| |  |
Db        196 ACCACTGCATCTGAGAAGCTCCGTGGCCA---TCAGAGTGATAGCTCTTCATCTGCCTCT 252

Qy        264 GATCAATTGGAAGCCCCTGGCACAGTTTCAGAAGAATCCCAGGTGCTTACTGATGTTGAG 323
```

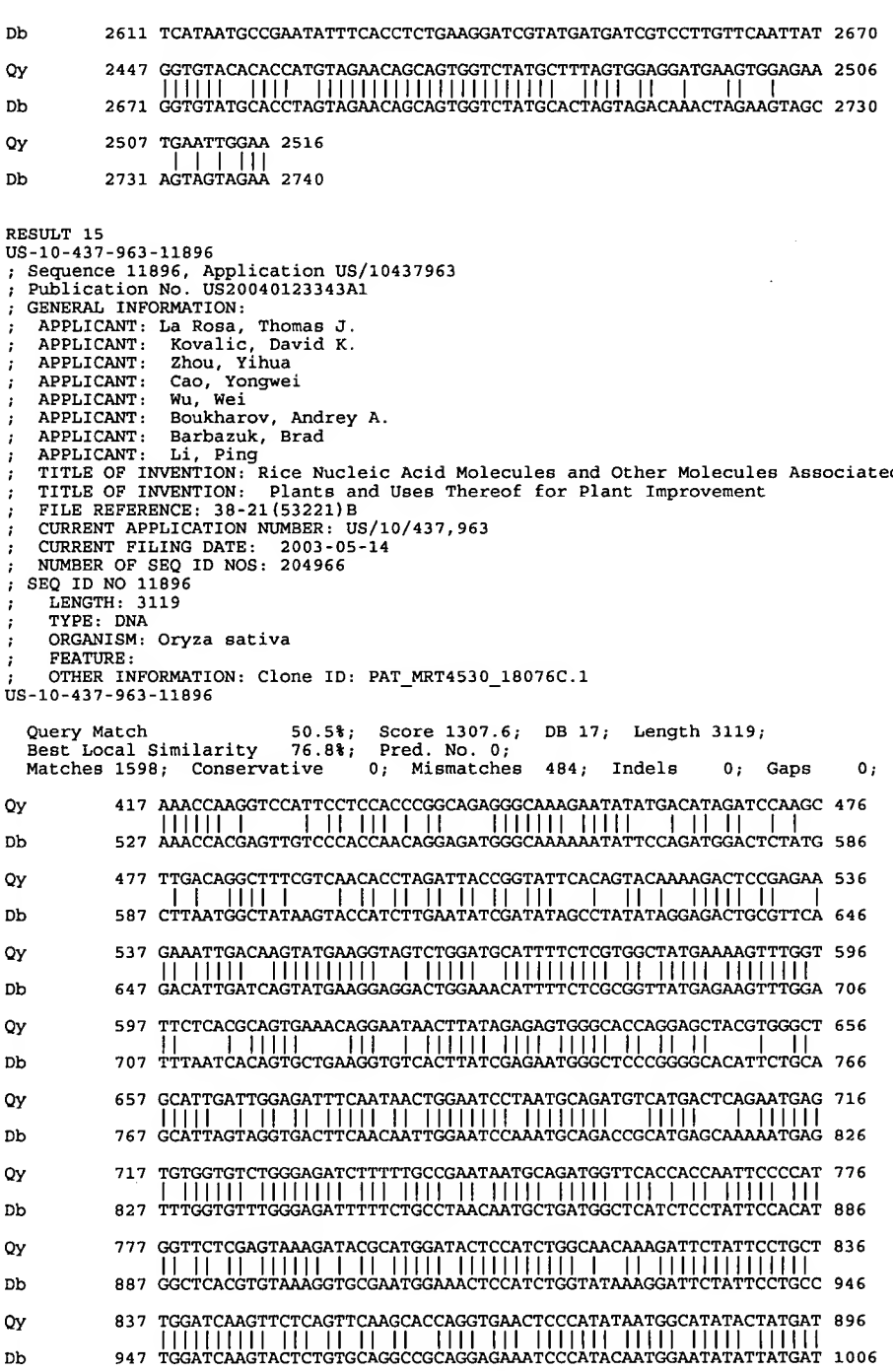




```
Qy       2451 TACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAATGAA 2510
Db       2473 TATGCACCGTGCAGAACCGCTGTAGTTTACGCTGCAGTAGATGATGATGATGATGATGAA 2532


RESULT 13
US-10-056-454A-12
; Sequence 12, Application US/10056454A
; Publication No. US20030166919A1
;  GENERAL INFORMATION:
;       APPLICANT: National Starch and Chemical Investment Holding Corporation
;       TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
;       NUMBER OF SEQUENCES: 20
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: National Starch and Chemical Investment Holding Corporation
;            STREET: 1000 Uniqema Blvd.
;            CITY: Newcastle
;            STATE: Delaware
;            COUNTRY: United States of America
;            ZIP: 19720
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/10/056,454A
;            FILING DATE: 25-Jun-2002
;   INFORMATION FOR SEQ ID NO: 12:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 3003 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-056-454A-12

  Query Match             52.5%;  Score 1357.8;  DB 15;  Length 3003;
  Best Local Similarity   76.3%;  Pred. No. 0;
  Matches 1682;  Conservative    0;  Mismatches  522;  Indels    1;  Gaps    1;

Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
Db        571 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 630

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
Db        631 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 690

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
Db        691 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 750

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
Db        751 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 810

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
Db        811 AAGAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 870

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
Db        871 CCAGTCAGCTGCCCTCATTGGGGATTTCAACAATTGGGACGCAAATGCTGACTTTATGAC 930

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
Db        931 TCGGAATGAATTTGGTGTCTGAGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 990

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
Db        991 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1050

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
Db       1051 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 1110

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
Db       1111 ATATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 1170

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
Db       1171 AAAGTCGGTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1230

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCAT-CAAAAAGCTTGGCTACAATG 1065
Db       1231 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAAGCTTGGGTACAATG 1290

Qy       1066 CTGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCA 1125
Db       1291 CGGTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCA 1350

Qy       1126 CAAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAG 1185
Db       1351 CAAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTTGATTG 1410

Qy       1186 ATAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAA 1245
Db       1411 ATAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAA 1470

Qy       1246 CTAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTG 1305
Db       1471 ATAATACTTTAGATGGACTGAACATGTTTGACGGCACAGATAGTTGTTACTTTCACTCTG 1530

Qy       1306 GACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGG 1365
Db       1531 GAGCTCGTGGTTATCATTGGATGTGGGATTTCCGCCTCTTTAACTATGGAAACTGGGAGG 1590

Qy       1366 TTCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGT 1425
Db       1591 TACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGAGTTCAAATTTGATGGAT 1650

Qy       1426 TCAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTA 1485
Db       1651 TTAGATTTGATGGTGTGACATCAATGATGTGTACTCACCACGGATTATCGGTGGGATTCA 1710

Qy       1486 CCGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGA 1545
Db       1711 CTGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTGGATGCTGTTGTGTATCTGA 1770

Qy       1546 TGCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATG 1605
Db       1771 TGCTGGTCAACGATCTTATTCATGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATG 1830

Qy       1606 TTAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATC 1665
Db       1831 TTAGCGGAATGCCGACATTTTGTGTTCCCGTTCAAGATGGGGGTGTTGGCTTTGACTATC 1890

Qy       1666 GTCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATT 1725
Db       1891 GGCTGCATATGGCAATTGCTGATAAATGGATTGAGTTGCTCAAGAAACGGGATGAGGATT 1950

Qy       1726 GGAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTT 1785
Db       1951 GGAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTT 2010

Qy       1786 CTTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGA 1845
Db       2011 CATACGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATTCTGGCTGA 2070

Qy       1846 TGGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATC 1905
Db       2071 TGGACAAGGATATGTATGATTTTATGGCTCTGGATAGACCGTCAACATCATTAATAGATC 2130
```

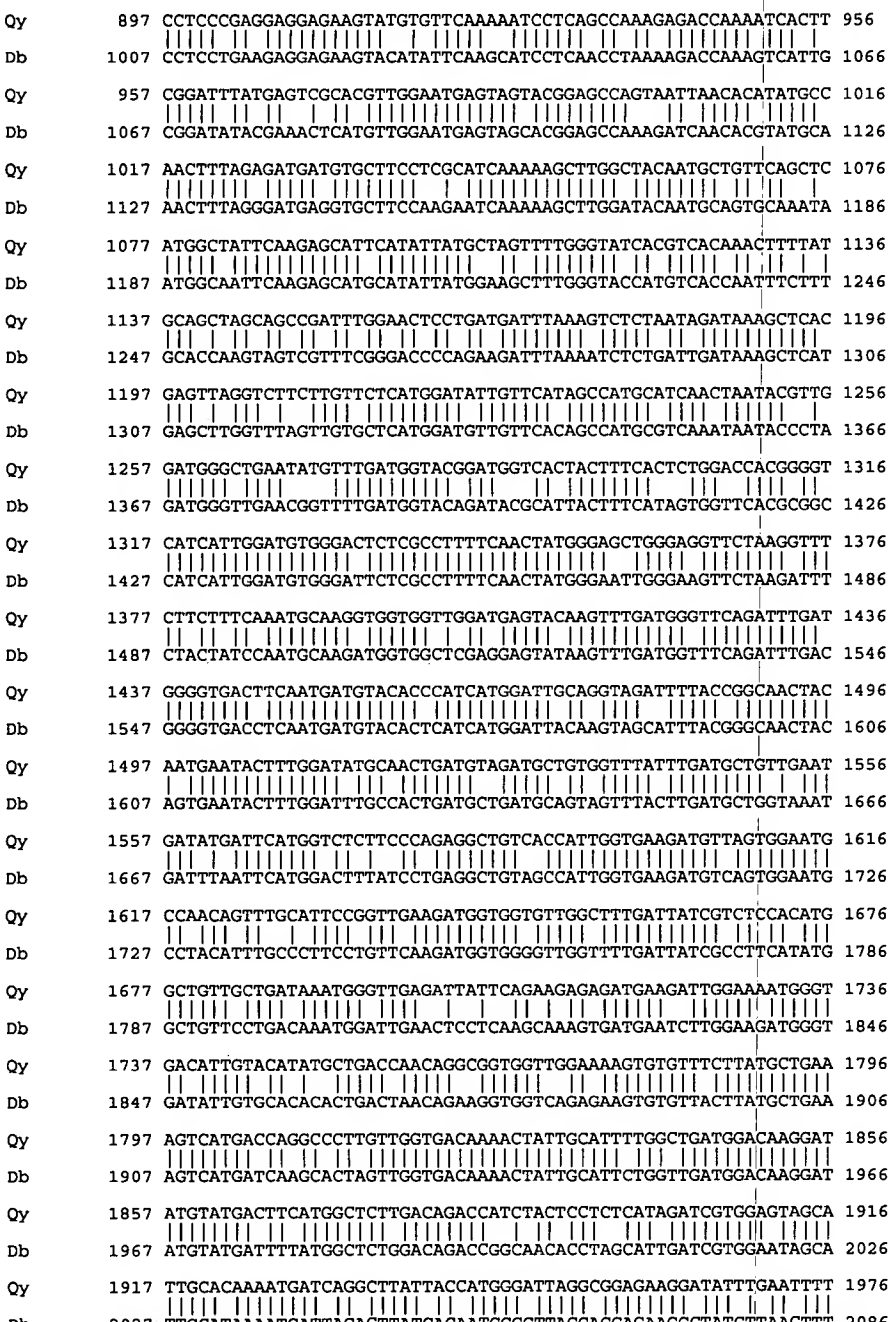
```
Qy       1906 GTGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGAT 1965
Db       2131 GTGGGATAGCATTACACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGT 2190

Qy       1966 ATTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTG 2025
Db       2191 ACCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTG 2250

Qy       2026 ATCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCC 2085
Db       2251 AACAACACCTCTCTGATGGCTCAGTAATTCCCAGAAACCAATTCAGTTATGATAAATGCA 2310

Qy       2086 GGCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTG 2145
Db       2311 GACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCGTGGGTTGCAAGAATTTG 2370

Qy       2146 ATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACA 2205
Db       2371 ACCGGGCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCA 2430

Qy       2206 TATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTG 2265
Db       2431 TATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAAAAGGAAACCTAGTTTTTG 2490

Qy       2266 TATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAG 2325
Db       2491 TCTTTAATTTTCACTGGACAAAAGGCTATTCAGACTATCGCATAGGCTGCCTGAAGCCTG 2550

Qy       2326 GAAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTA 2385
Db       2551 GAAAATACAAGGTTGCCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTG 2610

Qy       2386 GTCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCA 2445
Db       2611 ATCATAATGCCGAATATTTCACCTTTGAAGGATGGTATGATGATCGTCCTCGTTCAATTA 2670

Qy       2446 TGGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGA 2505
Db       2671 TGGTGTATGCACCTAGTAGAACAGCAGTGGTCTATGCACTAGTAGACAAAGAAGAAGAAG 2730

Qy       2506 ATGAATTGGAACCTGTCGCCGGTTAAGATATATCTTAACAACAGG 2550
Db       2731 AAGAAGAAGAAGTAGCAGTAGTAGAAGAAGTAGTAGTAGAAGAAG 2775


RESULT 14
US-10-056-454A-13
; Sequence 13, Application US/10056454A
; Publication No. US20030166919A1
;   GENERAL INFORMATION:
;        APPLICANT: National Starch and Chemical Investment Holding Corporation
;        TITLE OF INVENTION: Improvements in or Relating to Plant Starch Composition
;        NUMBER OF SEQUENCES: 20
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: National Starch and Chemical Investment Holding Corporation
;             STREET: 1000 Uniqema Blvd.
;             CITY: Newcastle
;             STATE: Delaware
;             COUNTRY: United States of America
;             ZIP: 19720
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/10/056,454A
;             FILING DATE: 25-Jun-2002
;   INFORMATION FOR SEQ ID NO: 13:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 2975 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-10-056-454A-13

  Query Match             51.8%;  Score 1341.2;  DB 15;  Length 2975;
  Best Local Similarity   76.7%;  Pred. No. 0;
  Matches 1665;  Conservative    0;  Mismatches  503;  Indels    2;  Gaps    2;

Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
Db        573 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 632

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
Db        633 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 692

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
Db        693 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 752

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
Db        753 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGC-TTTTCTCGTGGTTATGA 811

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
Db        812 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 871

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
Db        872 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 931

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
Db        932 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 991

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
Db        992 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1051

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
Db       1052 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 1111

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
Db       1112 ATATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 1171

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
Db       1172 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1231

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
Db       1232 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAGCTTGGGTACAATGC 1291

Qy       1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
Db       1292 GCTGCGAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1351

Qy       1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
Db       1352 AAATTTTTTTGCACCAAGCAGCCGTTTTGGAACGCCCGACGACCTTAAGTCTTCGATTGA 1411

Qy       1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246
Db       1412 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATCGTTCACAGCCATGCATCAAA 1471

Qy       1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306
Db       1472 TAATACTTTAGATGGACTGAACATGTTTGACGGCACCGATAGTTGTTACTTTCACTCTGG 1531

Qy       1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366
```

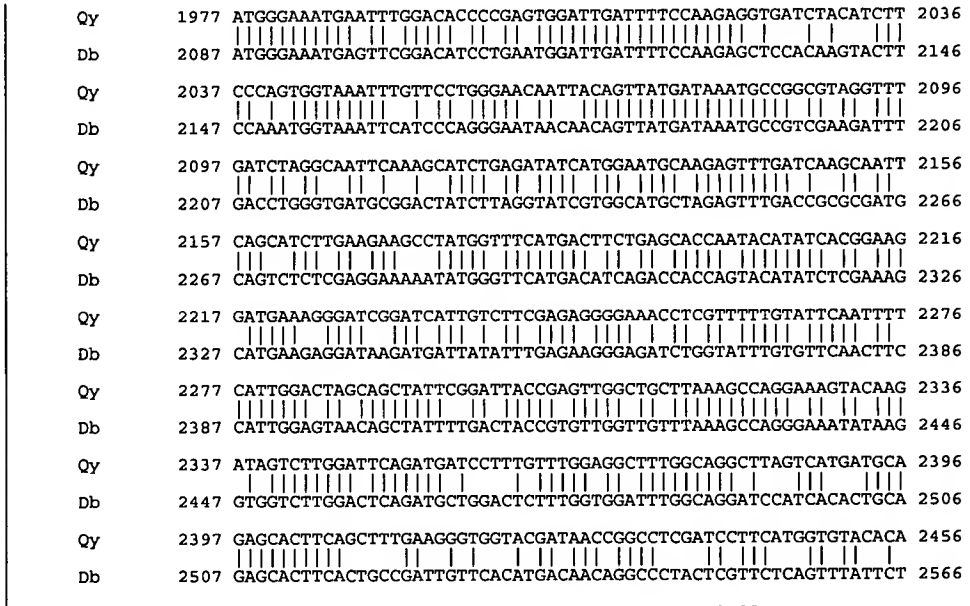




RESULT 15
US-10-437-963-11896
; Sequence 11896, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; APPLICANT: Wu, Wei
; APPLICANT: Boukharov, Andrey A.
; APPLICANT: Barbazuk, Brad
; APPLICANT: Li, Ping
; TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53221)B
; CURRENT APPLICATION NUMBER: US/10/437,963
; CURRENT FILING DATE: 2003-05-14
; NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 11896
; LENGTH: 3119
; TYPE: DNA
; ORGANISM: Oryza sativa
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT4530_18076C.1
US-10-437-963-11896

Query Match 50.5%; Score 1307.6; DB 17; Length 3119;
Best Local Similarity 76.8%; Pred. No. 0;
Matches 1598; Conservative 0; Mismatches 484; Indels 0; Gaps 0;





Search completed: July 17, 2004, 00:05:39
Job time : 1591 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: July 16, 2004, 18:07:05 ; Search time 182 Seconds
(without alignments)
7891.280 Million cell updates/sec

Title: US-09-297-703C-28
Perfect score: 2588
Sequence: 1 ctctctaacttctcagcgaa.....attattgatcttcctatgtt 2588

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 682709 seqs, 277475446 residues

Total number of hits satisfying chosen parameters: 1365418

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	1382.4	53.4	3074	3	US-09-087-277-1	Sequence 1, Appli
	2	1382.4	53.4	3074	4	US-09-658-499-1	Sequence 1, Appli
	3	1256.6	48.6	2720	4	US-09-731-166-11	Sequence 11, Appl
	4	1251.8	48.4	2446	4	US-09-731-166-9	Sequence 9, Appli
	5	1251.8	48.4	2665	4	US-09-257-894-1	Sequence 1, Appli
	6	1251.8	48.4	2725	3	US-08-941-445A-14	Sequence 14, Appl
	7	1245.2	48.1	2853	4	US-09-609-040-3	Sequence 3, Appli
	8	1097	42.4	2087	4	US-09-257-894-9	Sequence 9, Appli
c	9	1095.4	42.3	2165	4	US-09-257-894-8	Sequence 8, Appli
	10	947.4	36.6	1393	3	US-09-087-277-3	Sequence 3, Appli
	11	947.4	36.6	1393	4	US-09-658-499-3	Sequence 3, Appli
	12	633.4	24.5	2470	4	US-09-731-166-13	Sequence 13, Appl
c	13	633.4	24.5	2487	4	US-09-257-894-19	Sequence 19, Appl
	14	633.4	24.5	2565	4	US-09-257-894-24	Sequence 24, Appl
	15	633.4	24.5	2763	3	US-08-941-445A-16	Sequence 16, Appl
	16	633.4	24.5	2772	4	US-09-257-894-12	Sequence 12, Appl
	17	605.2	23.4	3128	3	US-08-716-449-1	Sequence 1, Appli
	18	587.8	22.7	2909	3	US-08-104-158-1	Sequence 1, Appli
	19	587.8	22.7	2909	4	US-09-609-040-1	Sequence 1, Appli
	20	546.8	21.1	1809	4	US-09-257-894-25	Sequence 25, Appl
	21	546.8	21.1	1865	4	US-09-257-894-20	Sequence 20, Appl
	22	369	14.3	11469	4	US-09-367-895-29	Sequence 29, Appl
	23	369	14.3	11478	3	US-08-981-803-29	Sequence 29, Appl
	24	369	14.3	11478	3	US-08-983-440-29	Sequence 29, Appl
	25	326.6	12.6	5402	4	US-09-221-017B-194	Sequence 194, App
	26	178.8	6.9	303	4	US-09-313-294A-6200	Sequence 6200, Ap
c	27	109.6	4.2	414	4	US-09-257-894-2	Sequence 2, Appli
c	28	96.2	3.7	601	4	US-09-401-064-304	Sequence 304, App
c	29	86.2	3.3	1230025	4	US-09-198-452A-1	Sequence 1, Appli
	30	80.8	3.1	1830121	4	US-09-557-884-1	Sequence 1, Appli
	31	80.8	3.1	1830121	4	US-09-643-990A-1	Sequence 1, Appli
c	32	75.6	2.9	4403765	3	US-09-103-840A-2	Sequence 2, Appli
c	33	75.6	2.9	4411529	3	US-09-103-840A-1	Sequence 1, Appli
	34	68.4	2.6	2426	3	US-08-528-026C-3	Sequence 3, Appli
	35	67.2	2.6	2475	4	US-09-579-365-1	Sequence 1, Appli
	36	66.2	2.6	1866	4	US-09-537-120-1	Sequence 1, Appli
	37	65.6	2.5	2307	4	US-09-489-039A-3960	Sequence 3960, Ap
c	38	56.8	2.2	571	4	US-09-257-894-16	Sequence 16, Appl
	39	55.4	2.1	356	4	US-09-634-238-169	Sequence 169, App
	40	45	1.7	2691	4	US-09-298-924-5	Sequence 5, Appli
	41	43.2	1.7	1308	4	US-09-252-991A-8131	Sequence 8131, Ap
c	42	43.2	1.7	1701	4	US-09-252-991A-8109	Sequence 8109, Ap
	43	43.2	1.7	2472	4	US-09-252-991A-8197	Sequence 8197, Ap
c	44	43.2	1.7	7218	1	US-08-232-463-14	Sequence 14, Appl
	45	41.4	1.6	1404	1	US-08-204-656B-1	Sequence 1, Appli

ALIGNMENTS

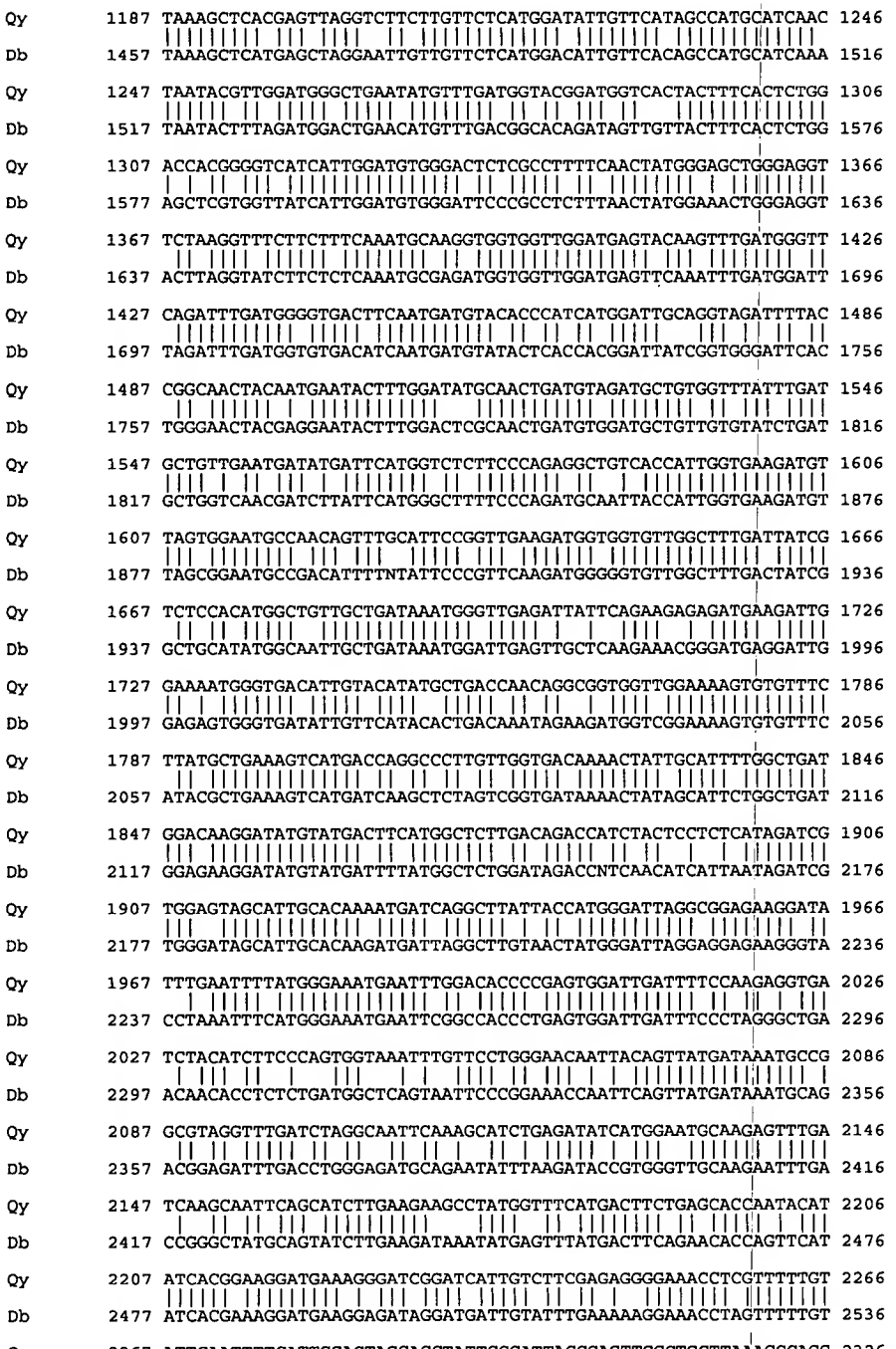
```
RESULT 1
US-09-087-277-1
; Sequence 1, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT: KHOSNOODI, Jamshid
;  APPLICANT: LARSSON, Clas-Tomas
;  APPLICANT: LARSSON, Hakan
;  APPLICANT: RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/09/087,277B
;  CURRENT FILING DATE: 1998-05-29
;  EARLIER APPLICATION NUMBER: PCT/SE96/01558
;  EARLIER FILING DATE: 1996-11-28
;  EARLIER APPLICATION NUMBER: SE 9504272-7
;  EARLIER FILING DATE: 1995-11-29
;  EARLIER APPLICATION NUMBER: SE 9601506-0
;  EARLIER FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;   LENGTH: 3074
;   TYPE: DNA
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism:beII gene
;   OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
;   OTHER INFORMATION: (potato)
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (189)..(2825)
;   FEATURE:
;   NAME/KEY: sig_peptide
;   LOCATION: (189)..(332)
;   FEATURE:
;   NAME/KEY: mat_peptide
;   LOCATION: (333)..(2825)
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (92)..(2156)
;   OTHER INFORMATION: Nucleotides 92, 285, 1406, 1430, 1897 and 2156 are
;   OTHER INFORMATION: n wherein n = A, C, G or T.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (285)..(287)
;   OTHER INFORMATION: Amino acid -16 is Xaa wherein Xaa = Ile, Leu, Val
;   OTHER INFORMATION: or Phe.
;   FEATURE:
```

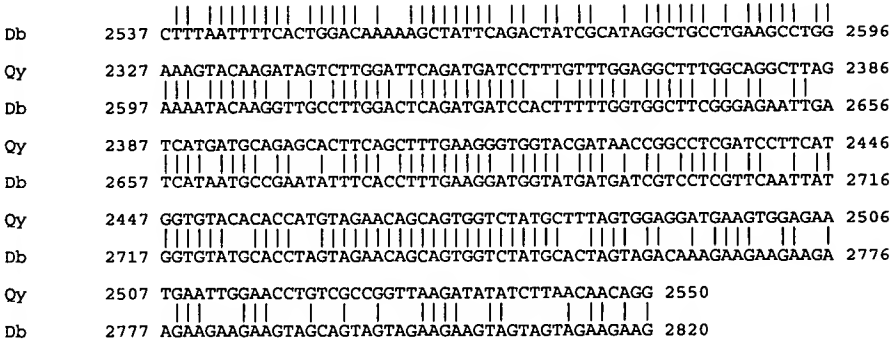
```
;   NAME/KEY: misc_feature
;   LOCATION: (1404)..(1406)
;   OTHER INFORMATION: Amino acid 358 is Xaa wherein Xaa = Leu or Phe.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1428)..(1430)
;   OTHER INFORMATION: Amino acid 366 is Xaa wherein Xaa = Thr.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1896)..(1898)
;   OTHER INFORMATION: Amino acid 522 is Xaa wherein Xaa = Tyr, Ser, Cys
;   OTHER INFORMATION: or Phe.
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (2154)..(2156)
;   OTHER INFORMATION: Amino acid 608 is Xaa wherein Xaa = Pro.
US-09-087-277-1

  Query Match             53.4%;  Score 1382.4;  DB 3;  Length 3074;
  Best Local Similarity   76.6%;  Pred. No. 0;
  Matches 1689;  Conservative    0;  Mismatches  515;  Indels    0;  Gaps    0;

Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
              || | ||   || |    ||||  ||   | |       ||||| |||      |
Db        617 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 676

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
                |    | |   |||  ||| |||||||| ||    || || |  || ||||| ||
Db        677 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 736

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
              ||| ||    ||||||  || |||||||||||| |||||| ||||||||||||||| |
Db        737 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 796

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
              |||  | || | |||||||||||||| ||| || |||| || |||||||||| |||||
Db        797 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 856

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
              |||  | ||||||  | || ||||  ||||| || |||||  | ||||||| || || ||
Db        857 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 916

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
                ||  |||||  | |||||||||||||| || ||| |  | ||||| ||  | |||||
Db        917 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 976

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
              || |||||| | |||||||||||||| ||| |||| |||||||  |||||||| ||  |
Db        977 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 1036

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
              |||||| ||||| ||  |||| |||||||| ||||| |||||||| ||    || |||||
Db       1037 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1096

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
              |||||||||||||||||| | |||  | ||    || | |||| | ||||||||||| ||
Db       1097 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 1156

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
              ||| |||||||| ||||| ||||||| |||| | ||| || | || | |||||||| |||
Db       1157 ATATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 1216

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
              ||| || ||  | || ||||| || ||  |||||||||||||| ||||||| | ||||||
Db       1217 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1276

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
              | |||| |  || |||||||||||| || |||||||||||| |||||||||| ||||||||
Db       1277 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAGCTTGGGTACAATGC 1336

Qy       1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
              || ||  | |||||||||||||||||| |||||||||||||||| ||||| |||||
Db       1337 GGTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1396

Qy       1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
              ||| ||||  ||| | |||||||| |||||||| || || ||  | |||||| | || ||
Db       1397 AAATTTTTTNGCACCAAGCAGCCGTTTTGGAACNCCCGACGACCTTAAGTCTTTGATTGA 1456

Qy       1187 TAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAGCCATGCATCAAC 1246
              ||||||||| ||| ||||  || |||||||||||||| |||||||| ||||||||||||||
Db       1457 TAAAGCTCATGAGCTAGGAATTGTTGTTCTCATGGACATTGTTCACAGCCATGCATCAAA 1516

Qy       1247 TAATACGTTGGATGGGCTGAATATGTTTGATGGTACGGATGGTCACTACTTTCACTCTGG 1306
              |||||| || ||||| ||||| |||||||| || || ||| ||   ||||||||||||||
Db       1517 TAATACTTTAGATGGACTGAACATGTTTGACGGCACAGATAGTTGTTACTTTCACTCTGG 1576

Qy       1307 ACCACGGGGTCATCATTGGATGTGGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGT 1366
              | | || ||| |||||||||||||||| || ||||| || |||||||| | |||||||||
Db       1577 AGCTCGTGGTTATCATTGGATGTGGGATTCCCGCCTCTTTAACTATGGAAACTGGGAGGT 1636

Qy       1367 TCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTT 1426
              || |||| |||||| |||||||| || |||||||||||||||| ||| |||||||| ||
Db       1637 ACTTAGGTATCTTCTCTCAAATGCGAGATGGTGGTTGGATGAGTTCAAATTTGATGGATT 1696

Qy       1427 CAGATTTGATGGGGTGACTTCAATGATGTACACCCATCATGGATTGCAGGTAGATTTTAC 1486
              |||||||||| ||||| |||||||||| || || || |||||    ||| |  || ||
Db       1697 TAGATTTGATGGTGTGACATCAATGATGTATACTCACCACGGATTATCGGTGGGATTCAC 1756

Qy       1487 CGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGGTTTATTTGAT 1546
              || |||||| | |||||||||||    |||||||||| |||||||| || ||| ||||
Db       1757 TGGGAACTACGAGGAATACTTTGGACTCGCAACTGATGTGGATGCTGTTGTGTATCTGAT 1816

Qy       1547 GCTGTTGAATGATATGATTCATGGTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGT 1606
              |||| | || ||| | |||||||| || |||||||| ||  | ||||||||||||||||
Db       1817 GCTGGTCAACGATCTTATTCATGGGCTTTTCCCAGATGCAATTACCATTGGTGAAGATGT 1876

Qy       1607 TAGTGGAATGCCAACAGTTTGCATTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCG 1666
              ||| |||||||| ||| ||| ||||| ||| |||||||| ||||||||||||| |||||
Db       1877 TAGCGGAATGCCGACATTTTNTATTCCCGTTCAAGATGGGGGTGTTGGCTTTGACTATCG 1936

Qy       1667 TCTCCACATGGCTGTTGCTGATAAATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTG 1726
              || || |||||  |||||||||||||| |||||  |  |||| | ||||| |||||
Db       1937 GCTGCATATGGCAATTGCTGATAAATGGATTGAGTTGCTCAAGAAACGGGATGAGGATTG 1996

Qy       1727 GAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTC 1786
              || | ||||||| ||||| |||| ||||| || ||  | |||| ||||||||||||||||
Db       1997 GAGAGTGGGTGATATTGTTCATACACTGACAAATAGAAGATGGTCGGAAAAGTGTGTTTC 2056

Qy       1787 TTATGCTGAAAGTCATGACCAGGCCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGAT 1846
              || |||||||||||||| || || || |||| |||||||| ||||| ||||||||
Db       2057 ATACGCTGAAAGTCATGATCAAGCTCTAGTCGGTGATAAAACTATAGCATTCTGGCTGAT 2116

Qy       1847 GGACAAGGATATGTATGACTTCATGGCTCTTGACAGACCATCTACTCCTCTCATAGATCG 1906
              ||| |||||||||||||| || |||||||| || |||||  || ||  |  | ||||||||
Db       2117 GGAGAAGGATATGTATGATTTTATGGCTCTGGATAGACCNTCAACATCATTAATAGATCG 2176

Qy       1907 TGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATA 1966
              |||  |||||||||||||| ||||| |||||| | || |||||||||||  |||||||| ||
Db       2177 TGGGATAGCATTGCACAAGATGATTAGGCTTGTAACTATGGGATTAGGAGGAGAAGGGTA 2236

Qy       1967 TTTGAATTTTATGGGAAATGAATTTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGA 2026
                | ||||| |||||||||||||| || ||||| |||||||||||||| || || | |||
Db       2237 CCTAAATTTCATGGGAAATGAATTCGGCCACCCTGAGTGGATTGATTTCCCTAGGGCTGA 2296

Qy       2027 TCTACATCTTCCCAGTGGTAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCG 2086
              | ||| ||  |  |||  | |  |||| || ||| | | |||||||||||||||| |
Db       2297 ACAACACCTCTCTGATGGCTCAGTAATTCCCGGAAACCAATTCAGTTATGATAAATGCAG 2356

Qy       2087 GCGTAGGTTTGATCTAGGCAATTCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGA 2146
              || || ||||| || ||  || || |  || | ||||| | |||  ||||||| |||||
Db       2357 ACGGAGATTTGACCTGGGAGATGCAGAATATTTAAGATACCGTGGGTTGCAAGAATTTGA 2416

Qy       2147 TCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACAT 2206
              |  || || ||| ||||||||||  |||| || |||||||| || |||||  | |||
Db       2417 CCGGGCTATGCAGTATCTTGAAGATAAATATGAGTTTATGACTTCAGAACACCAGTTCAT 2476
```

```
Qy       2207 ATCACGGAAGGATGAAAGGGATCGGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGT 2266
             |||||| |||||||||| | ||| |||| ||||| || || |  |||||||| ||||||||
Db       2477 ATCACGAAAGGATGAAGGAGATAGGATGATTGTATTTGAAAAAGGAAACCTAGTTTTTGT 2536

Qy       2267 ATTCAATTTTCATTGGACTAGCAGCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGG 2326
              || |||||||| ||||| |  |||||||| || || ||  | |||||| | ||||| ||
Db       2537 CTTTAATTTTCACTGGACAAAAAGCTATTCAGACTATCGCATAGGCTGCCTGAAGCCTGG 2596

Qy       2327 AAAGTACAAGATAGTCTTGGATTCAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAG 2386
             ||| |||||| | | |||||| ||||||||||  | ||||| ||||| || ||  ||
Db       2597 AAAATACAAGGTTGCCTTGGACTCAGATGATCCACTTTTTGGTGGCTTCGGGAGAATTGA 2656

Qy       2387 TCATGATGCAGAGCACTTCAGCTTTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCAT 2446
             |||| |||| ||  | |||| ||||||||| ||||| |||| || ||||| ||  | ||
Db       2657 TCATAATGCCGAATATTTCACCTTTGAAGGATGGTATGATGATCGTCCTCGTTCAATTAT 2716

Qy       2447 GGTGTACACACCATGTAGAACAGCAGTGGTCTATGCTTTAGTGGAGGATGAAGTGGAGAA 2506
             ||||||  ||||  |||||||||||||||||||||||  |||| ||  | ||||  ||  |
Db       2717 GGTGTATGCACCTAGTAGAACAGCAGTGGTCTATGCACTAGTAGACAAAGAAGAAGAAGA 2776

Qy       2507 TGAATTGGAACCTGTCGCCGGTTAAGATATATCTTAACAACAGG 2550
              |||   |||  |  | |  |||| ||    | || | |
Db       2777 AGAAGAAGAAGTAGCAGTAGTAGAAGAAGTAGTAGTAGAAGAAG 2820
```

```
RESULT 2
US-09-658-499-1
; Sequence 1, Application US/09658499
; Patent No. 6469231
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/09/658,499
;  CURRENT FILING DATE:  2000-09-08
;  PRIOR APPLICATION NUMBER: 09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;  LENGTH: 3074
;  TYPE: DNA
;  ORGANISM: Unknown
;  FEATURE:
;  OTHER INFORMATION: Description of Unknown Organism:beII gene
;  OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
;  OTHER INFORMATION: (potato)
;  NAME/KEY: CDS
;  LOCATION: (189)..(2825)
;  NAME/KEY: sig_peptide
;  LOCATION: (189)..(332)
;  NAME/KEY: mat_peptide
;  LOCATION: (333)..(2825)
;  NAME/KEY: misc_feature
;  LOCATION: (92)..(2156)
;  OTHER INFORMATION: Nucleotides 92, 285, 1406, 1430, 1897 and 2156 are
;  OTHER INFORMATION: n wherein n = A, C, G or T.
;  NAME/KEY: misc_feature
;  LOCATION: (285)..(287)
;  OTHER INFORMATION: Amino acid -16 is Xaa wherein Xaa = Ile, Leu, Val
;  OTHER INFORMATION: or Phe.
;  NAME/KEY: misc_feature
;  LOCATION: (1404)..(1406)
;  OTHER INFORMATION: Amino acid 358 is Xaa wherein Xaa = Leu or Phe.
;  NAME/KEY: misc_feature
;  LOCATION: (1428)..(1430)
;  OTHER INFORMATION: Amino acid 366 is Xaa wherein Xaa = Thr.
;  NAME/KEY: misc_feature
;  LOCATION: (1896)..(1898)
;  OTHER INFORMATION: Amino acid 522 is Xaa wherein Xaa = Tyr, Ser, Cys
;  OTHER INFORMATION: or Phe.
;  NAME/KEY: misc_feature
;  LOCATION: (2154)..(2156)
;  OTHER INFORMATION: Amino acid 608 is Xaa wherein Xaa = Pro.
US-09-658-499-1

  Query Match             53.4%;  Score 1382.4;  DB 4;  Length 3074;
  Best Local Similarity   76.6%;  Pred. No. 0;
  Matches 1689;  Conservative    0;  Mismatches  515;  Indels    0;  Gaps    0;
```

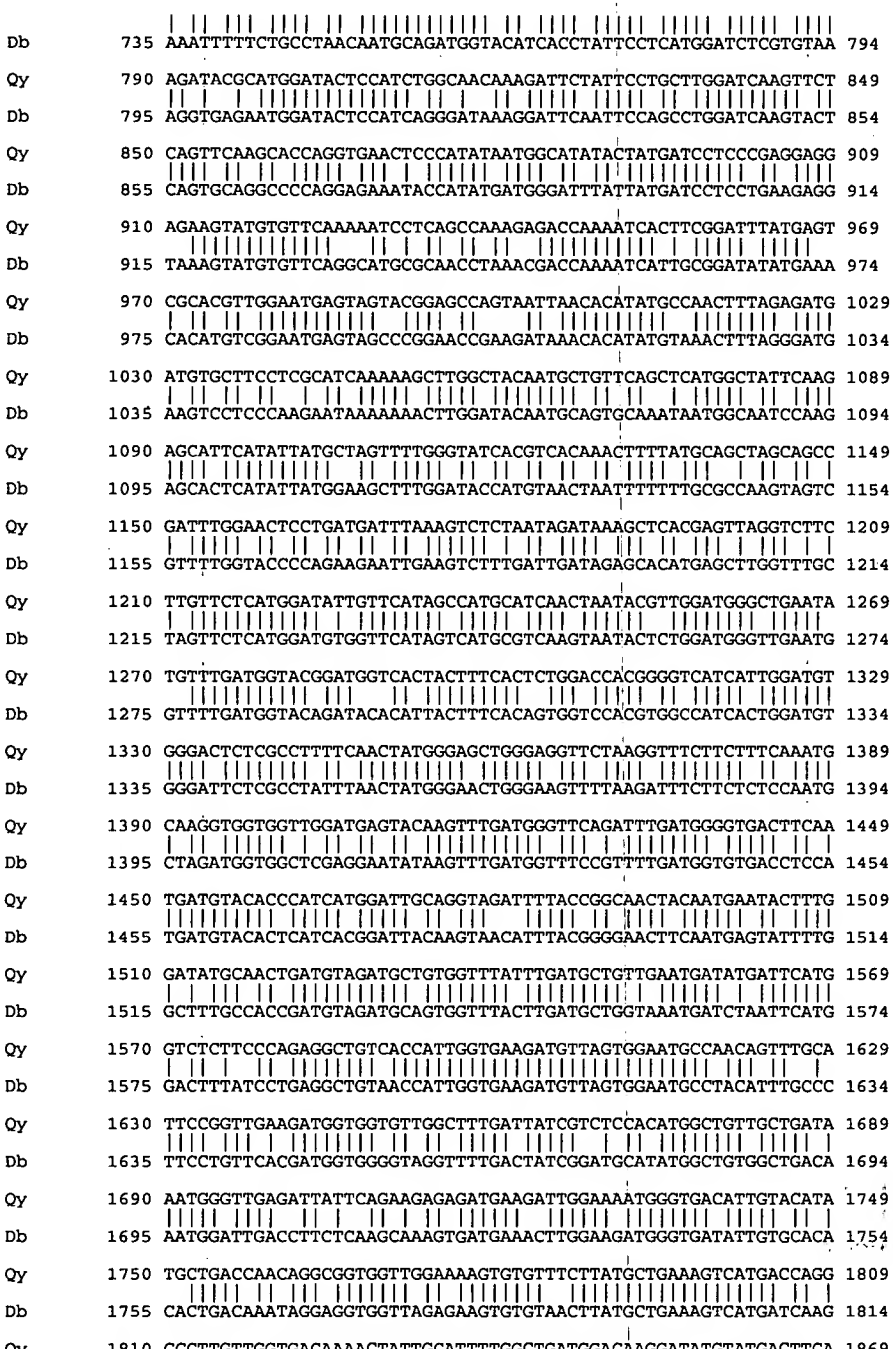
```
Qy        347 TGTTGAAGATGAAGTAAATAAAGAATCTGTTCCAATGCGGGAGACAGTTAGCATCAGAAA 406
              || | ||   || |    |||| ||    | |      |||||| |||       |
Db        617 TGGTAAACTGGAGGAGTCTAAAACATTAAATACTTCTGAAGAGACAATTATTGATGAATC 676

Qy        407 AATTGGATCTAAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACAT 466
              | |    | |   |||  ||| ||||||||  ||    || || |  || ||||| ||
Db        677 TGATAGGATCAGAGAGAGGGGCATCCCTCCACCTGGACTTGGTCAGAAGATTTATGAAAT 736

Qy        467 AGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAG 526
              ||| ||     ||||||  || |||||||||||| |||||| |||||||||||||||| |
Db        737 AGACCCCCTTTTGACAAACTATCGTCAACACCTTGATTACAGGTATTCACAGTACAAGAA 796

Qy        527 ACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGA 586
              |||  | || | |||||||||||||| ||| || |||| || |||||||||| |||||
Db        797 ACTGAGGGAGGCAATTGACAAGTATGAGGGTGGTTTGGAAGCTTTTTCTCGTGGTTATGA 856

Qy        587 AAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGC 646
              |||  | ||||||  | || ||||  ||||| || |||||  | |||||||| || || ||
Db        857 AAAAATGGGTTTCACTCGTAGTGCTACAGGTATCACTTACCGTGAGTGGGCTCCTGGTGC 916

Qy        647 TACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCAGATGTCATGAC 706
              ||  |||||  | |||||||||||||| || ||| |  | ||||| ||  | |||||
Db        917 CCAGTCAGCTGCCCTCATTGGAGATTTCAACAATTGGGACGCAAATGCTGACATTATGAC 976

Qy        707 TCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGATGGTTCACCACC 766
              || |||||| | |||||||||||||| ||| |||| |||||||  |||||||| ||  |
Db        977 TCGGAATGAATTTGGTGTCTGGGAGATTTTTCTGCCAAATAATGTGGATGGTTCTCCTGC 1036

Qy        767 AATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGCAACAAAGATTC 826
              |||||| ||||| ||  |||| |||||||| ||||| |||||||| ||     || |||||
Db       1037 AATTCCTCATGGGTCCAGAGTGAAGATACGTATGGACACTCCATCAGGTGTTAAGGATTC 1096

Qy        827 TATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCCATATAATGGCAT 886
              |||||||||||||||| | |||  | ||     || | |||| | |||||||||| ||
Db       1097 CATTCCTGCTTGGATCAACTACTCTTTACAGCTTCCTGATGAAATTCCATATAATGGAAT 1156

Qy        887 ATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACC 946
              ||| |||||||| ||||| ||||||| |||| | ||| || | || | |||||||| |||
Db       1157 ATATTATGATCCACCCGAAGAGGAGAGGTATATCTTCCAACACCCACGGCCAAAGAAACC 1216

Qy        947 AAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAA 1006
              ||| || ||  | || ||||| || ||  |||||||||||||| |||||||   ||||||
Db       1217 AAAGTCGCTGAGAATATATGAATCTCATATTGGAATGAGTAGTCCGGAGCCTAAAATTAA 1276

Qy       1007 CACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGC 1066
              | |||| |  || |||||||||| || |||||||||| |||||||||| ||||||||
Db       1277 CTCATACGTGAATTTTAGAGATGAAGTTCTTCCTCGCATAAAAAAGCTTGGGTACAATGC 1336

Qy       1067 TGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGTTTTGGGTATCACGTCAC 1126
              || ||  | |||||||||||||||||| |||||||||||||||| ||||| |||||
Db       1337 GGTGCAAATTATGGCTATTCAAGAGCATTCTTATTATGCTAGTTTTGGTTATCATGTCAC 1396

Qy       1127 AAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGA 1186
              ||| |||| ||| | |||||||| |||||||| || || ||  | |||||| | || ||
Db       1397 AAATTTTTTNGCACCAAGCAGCCGTTTTGGAACNCCCGACGACCTTAAGTCTTTGATTGA 1456
```





RESULT 3
US-09-731-166-11
; Sequence 11, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
; APPLICANT: Sewalt, Vincent J. H.
; APPLICANT: Singletary, George W.
; TITLE OF INVENTION: Production of Modified Polysaccarides
; FILE REFERENCE: 35718/206348
; CURRENT APPLICATION NUMBER: US/09/731,166
; CURRENT FILING DATE: 2000-12-06
; PRIOR APPLICATION NUMBER: 60/169,993
; PRIOR FILING DATE: 1999-12-06
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 2720
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: SBEIIb
; OTHER INFORMATION: Genbank Accession No. 6639126 AF072725
; NAME/KEY: CDS
; LOCATION: (101)...(2500)
US-09-731-166-11

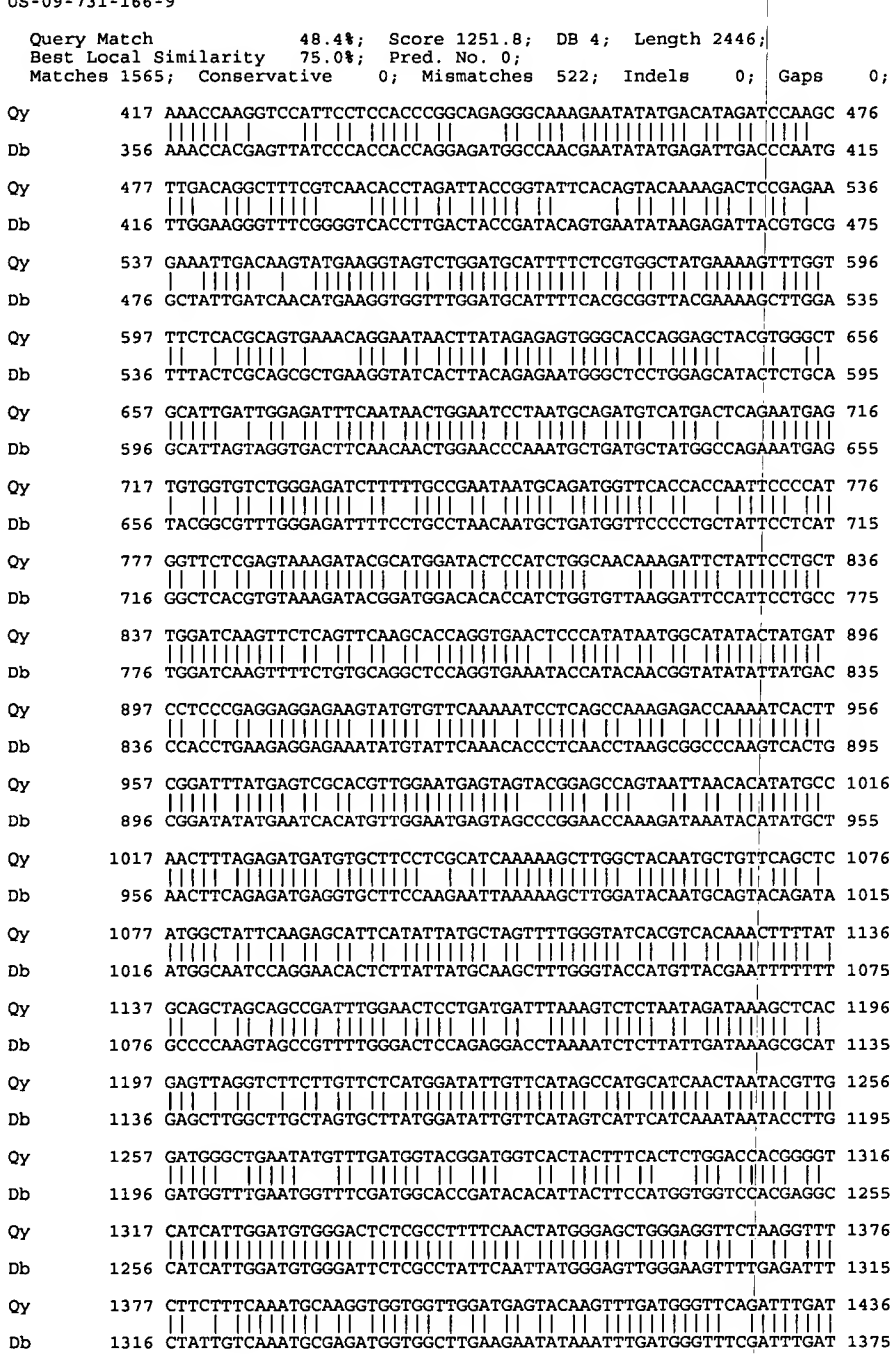
Query Match 48.6%; Score 1256.6; DB 4; Length 2720;
Best Local Similarity 75.6%; Pred. No. 0;
Matches 1559; Conservative 0; Mismatches 504; Indels 0; Gaps 0;

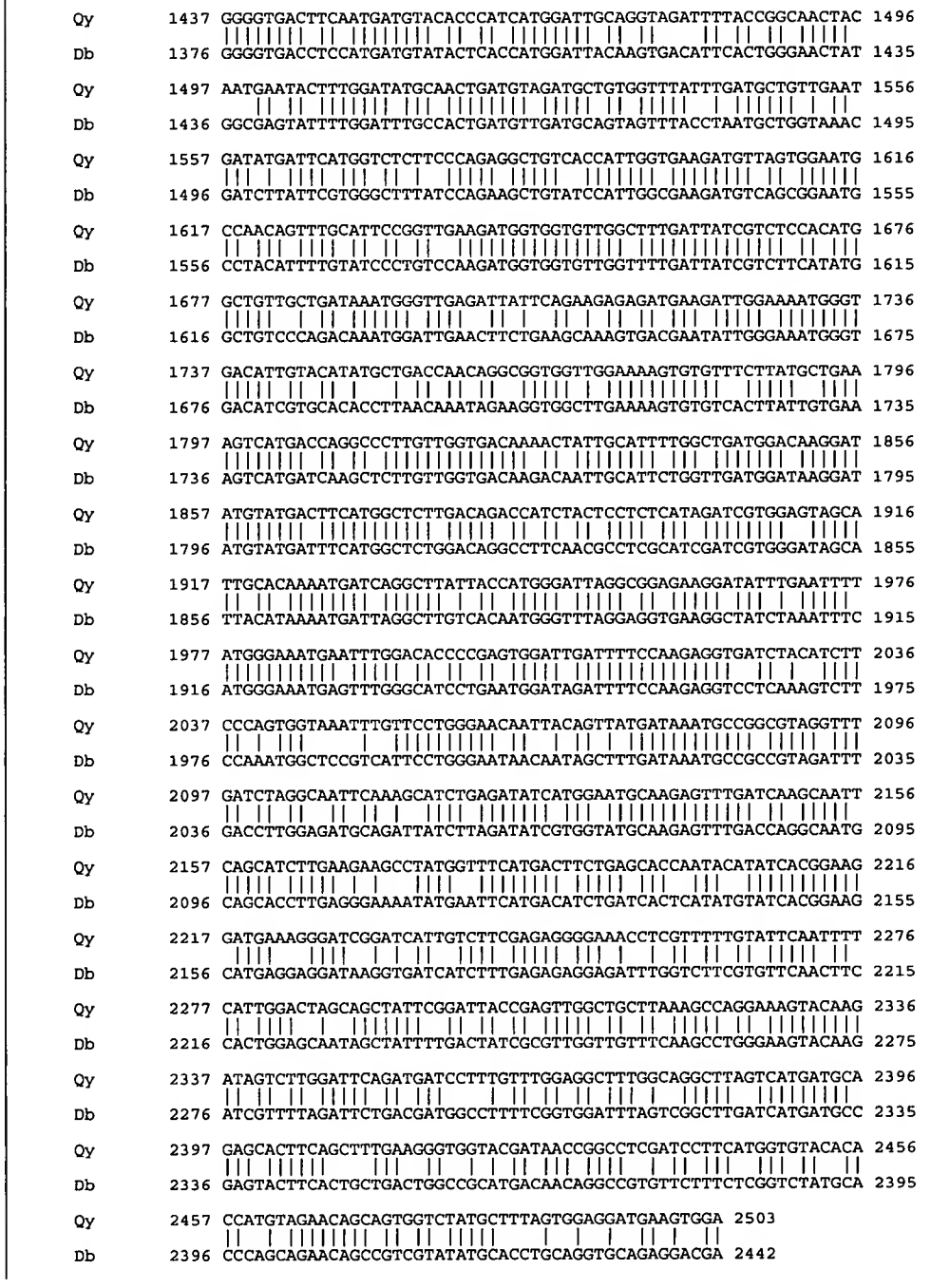


RESULT 4
US-09-731-166-9
; Sequence 9, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
; APPLICANT: Sewalt, Vincent J. H.
; APPLICANT: Singletary, George W.
; TITLE OF INVENTION: Production of Modified Polysaccarides
; FILE REFERENCE: 35718/206348
; CURRENT APPLICATION NUMBER: US/09/731,166
; CURRENT FILING DATE: 2000-12-06
; PRIOR APPLICATION NUMBER: 60/169,993
; PRIOR FILING DATE: 1999-12-06
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 2446
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: SBEIIa
; OTHER INFORMATION: Genbank Accession No. 6639126 U65948
; NAME/KEY: CDS
; LOCATION: (2)...(2446)

US-09-731-166-9

Query Match 48.4%; Score 1251.8; DB 4; Length 2446;
Best Local Similarity 75.0%; Pred. No. 0;
Matches 1565; Conservative 0; Mismatches 522; Indels 0; Gaps 0;





```
RESULT 5
US-09-257-894-1
; Sequence 1, Application US/09257894
; Patent No. 6376749
;  GENERAL INFORMATION:
;    APPLICANT:  Broglie, Karen E.
;    APPLICANT:  Klein, Theodore M.
;    APPLICANT:  Hubbard, Natalie L.
;    APPLICANT:  Lightner, Jonathan E.
;    TITLE OF INVENTION:  No. 6376749el Starches via Modification of
;    TITLE OF INVENTION:  Expression of Starch Biosynthesis
;    TITLE OF INVENTION:  Enzyme Genes
;    NUMBER OF SEQUENCES:  25
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  E. I. du Pont de Nemours and Company
;      STREET:  1007 Market Street
;      CITY:  Wilmington
;      STATE:  Delaware
;      COUNTRY:  USA
;      ZIP:  19898
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  Microsoft Windows 95
;      SOFTWARE:  Version 7.0A
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/257,894
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  09/091,052
;      FILING DATE:  JUNE 10, 1998
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Majarian, William R.
;      REGISTRATION NUMBER:  41,173
;      REFERENCE/DOCKET NUMBER:  BB-1066-A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  302-992-4926
;      TELEFAX:  302-773-0164
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2665 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  79..2476
US-09-257-894-1

  Query Match             48.4%;  Score 1251.8;  DB 4;  Length 2665;
  Best Local Similarity   75.4%;  Pred. No. 0;
  Matches 1556;  Conservative    0;  Mismatches  507;  Indels    0;  Gaps    0;

Qy        430 TTCCTCCACCCGGCAGAGGGCAAAGAATATATGACATAGATCCAAGCTTGACAGGCTTTC 489
              | || |||||  ||   || |||| |||||   | || || || |  |||  ||||| |
Db        413 TCCCCCCACCAAGCGATGGACAAAAAATATTCCAGATTGACCCCATGTTGCAAGGCTATA 472

Qy        490 GTCAACACCTAGATTACCGGTATTCACAGTACAAAAGACTCCGAGAAGAAATTGACAAGT 549
              | || || || || |||||     | || | |||| ||||   ||| |||||  |
Db        473 AGTACCATCTTGAGTATCGGTACAGCCTCTATAGAAGAATCCGTTCAGACATTGATGAAC 532

Qy        550 ATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTG 609
              |||||||  |  |||| || || || ||| | ||||| |||||||| ||      ||| |
Db        533 ATGAAGGAGGCTTGGAAGCCTTCTCCCGTAGTTATGAGAAGTTTGGATTTAATGCCAGCG 592

Qy        610 AAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGCTACGTGGGCTGCATTGATTGGAG 669
              |||  || || ||| |||| ||||| || |||||    |  || |||||| | || |
Db        593 CGGAAGGTATCACATATCGAGAATGGGCTCCTGGAGCATTTTCTGCAGCATTGGTGGGTG 652

Qy        670 ATTTCAATAACTGGAATCCTAATGCAGATGTCATGACTCAGAATGAGTGTGGTGTCTGGG 729
              | ||||| |||||| |||| |||||||||   ||||   | |||||||| |||||| ||||
Db        653 ACTTCAACAACTGGGATCCAAATGCAGATCGTATGAGCAAAAATGAGTTTGGTGTTTGGG 712

Qy        730 AGATCTTTTTGCCGAATAATGCAGATGGTTCACCACCAATTCCCCATGGTTCTCGAGTAA 789
              | || ||| |||| || |||||||||||| || |||| ||||| ||||| ||||| ||||
Db        713 AAATTTTTCTGCCTAACAATGCAGATGGTACATCACCTATTCCTCATGGATCTCGTGTAA 772

Qy        790 AGATACGCATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTGGATCAAGTTCT 849
              ||  |  |||||||||||||| || |  || ||||| ||||| || ||||||||||| ||
Db        773 AGGTGAGAATGGATACTCCATCAGGGATAAAGGATTCAATTCCAGCCTGGATCAAGTACT 832

Qy        850 CAGTTCAAGCACCAGGTGAACTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGG 909
              |||| || || ||||| ||| | |||||| |||| || || |||||||||| || ||||
Db        833 CAGTGCAGGCCCCAGGAGAAATACCATATGATGGGATTTATTATGATCCTCCTGAAGAGG 892

Qy        910 AGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGT 969
              ||||||||||||||    || | || || ||  |||||||||| | ||||| |||||
Db        893 TAAAGTATGTGTTCAGGCATGCGCAACCTAAACGACCAAAATCATTGCGGATATATGAAA 952

Qy        970 CGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATG 1029
              | || || |||||||||||  |||| ||     || ||||||||||  |||||||| ||||
Db        953 CACATGTCGGAATGAGTAGCCCGGAACCGAAGATAAACACATATGTAAACTTTAGGGATG 1012

Qy       1030 ATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAG 1089
              | || || ||  | || ||||| ||||| |||||||| || ||  | ||||| || ||||
Db       1013 AAGTCCTCCCAAGAATAAAAAAACTTGGATACAATGCAGTGCAAATAATGGCAATCCAAG 1072

Qy       1090 AGCATTCATATTATGCTAGTTTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCC 1149
              ||||  |||||||||||  || ||||| || || || || || |||| |||  | || || |
Db       1073 AGCACTCATATTATGGAAGCTTTGGATACCATGTAACTAATTTTTTTGCGCCAAGTAGTC 1132

Qy       1150 GATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTC 1209
              | ||||| || || || ||||| |||||| | || |||| ||| || ||| | ||| | | |
Db       1133 GTTTTGGTACCCCAGAAGATTTGAAGTCTTTGATTGATAGAGCACATGAGCTTGGTTTGC 1192

Qy       1210 TTGTTCTCATGGATATTGTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATA 1269
              | |||||||||||| | |||||||| ||||| |||| ||||||  |||||||| |||||
Db       1193 TAGTTCTCATGGATGTGGTTCATAGTCATGCGTCAAGTAATACTCTGGATGGGTTGAATG 1252

Qy       1270 TGTTTGATGGTACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGT 1329
              ||||||||||| |||   || |||||||||  ||| ||||| || ||||| |||||||
Db       1253 GTTTTGATGGTACAGATACACATTACTTTCACAGTGGTCCACGTGGCCATCACTGGATGT 1312

Qy       1330 GGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATG 1389
              |||| |||||||| || |||||||||| |||||| ||| |||| |||||||| || ||||
Db       1313 GGGATTCTCGCCTATTTAACTATGGGAACTGGGAAGTTTTAAGATTTCTTCTCTCCAATG 1372

Qy       1390 CAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAA 1449
              | || |||||| | || || || |||||||||| ||| | |||||||| ||||| || |
Db       1373 CTAGATGGTGGCTCGAGGAATATAAGTTTGATGGTTTCCGTTTTGATGGTGTGACCTCCA 1432

Qy       1450 TGATGTACACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTG 1509
              |||||||||| || || ||||| || |||   ||||| || |||| |||||| || ||||
Db       1433 TGATGTACACTCACCACGGATTACAAGTAACATTTACGGGGAACTTCAATGAGTATTTTG 1492

Qy       1510 GATATGCAACTGATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATG 1569
              | | ||| || |||||||||| |||||||| |||||||| | |||||| | ||||||| 
Db       1493 GCTTTGCCACCGATGTAGATGCAGTGGTTTACTTGATGCTGGTAAATGATCTAATTCATG 1552

Qy       1570 GTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCA 1629
              | || |  || |||||||| |||||||||||||||||||||||||||| ||| ||  |
Db       1553 GACTTTATCCTGAGGCTGTAACCATTGGTGAAGATGTTAGTGGAATGCCTACATTTGCCC 1612

Qy       1630 TTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATA 1689
              |||| ||| | |||||||| || || ||||| |||||  | || |||||||| ||||| |
Db       1613 TTCCTGTTCACGATGGTGGGGTAGGTTTTGACTATCGGATGCATATGGCTGTGGCTGACA 1672

Qy       1690 AATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATA 1749
              ||||| ||||  || |  || | || ||||||  |||||| |||||||| |||| || |
Db       1673 AATGGATTGACCTTCTCAAGCAAAGTGATGAAACTTGGAAGATGGGTGATATTGTGCACA 1732

Qy       1750 TGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGG 1809
              ||||| || ||| ||||||| || ||||||||  ||||||||||||||||||| || |
```

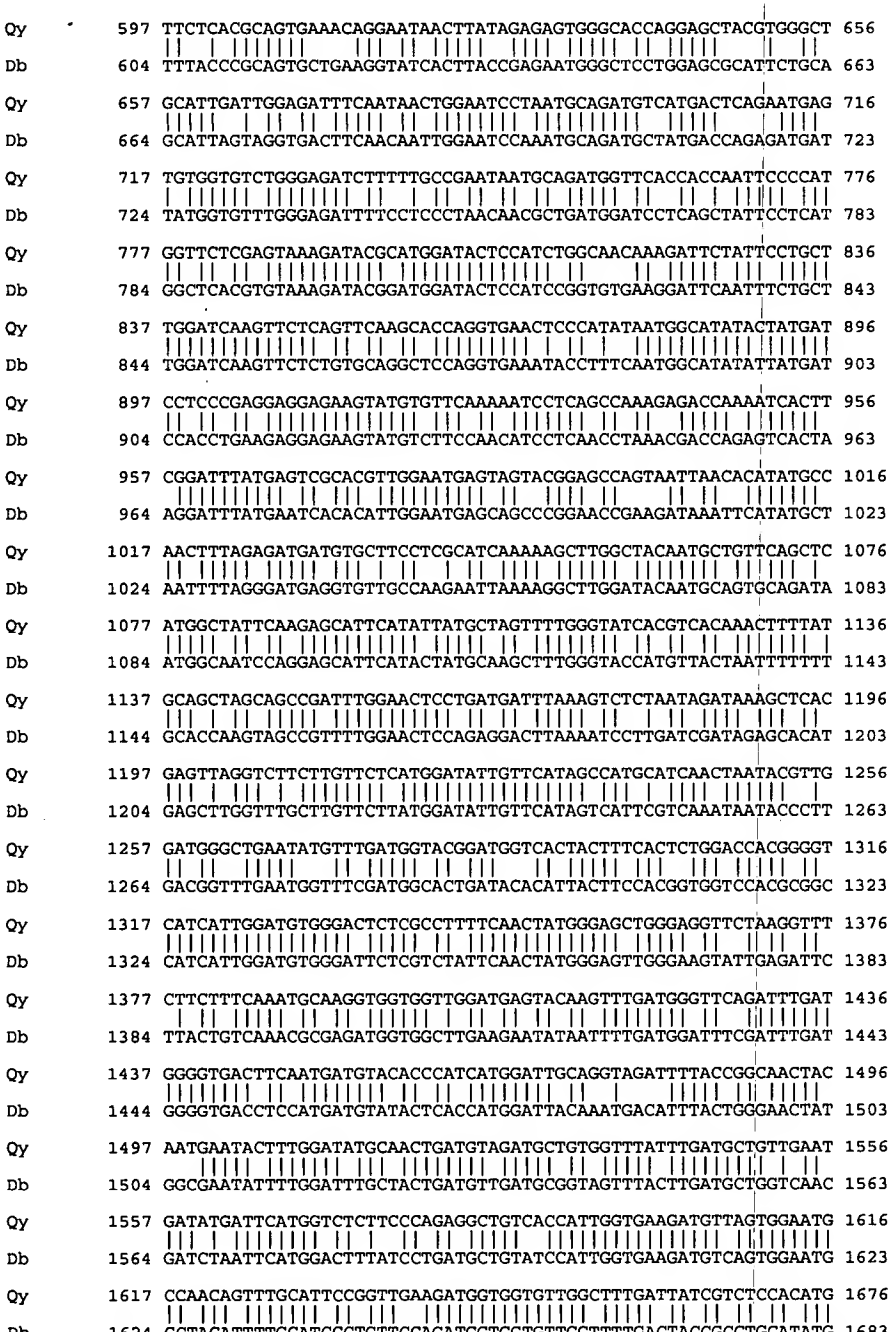
```
Db       1733 CACTGACAAATAGGAGGTGGTTAGAGAAGTGTGTAACTTATGCTGAAAGTCATGATCAAG 1792

Qy       1810 CCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCA 1869

Db       1793 CATTAGTCGGCGACAAGACTATTGCGTTTTGGTTGATGGACAAGGATATGTATGATTTCA 1852

Qy       1870 TGGCTCTTGACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGA 1929

Db       1853 TGGCCCTCGATAGACCTTCAACTCCTACCATTGATCGTGGGATAGCATTACATAAGATGA 1912

Qy       1930 TCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAAT 1989

Db       1913 TTAGACTTATCACAATGGGTTTAGGAGGAGAGGGCTATCTTAATTTCATGGGAAATGAGT 1972

Qy       1990 TTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAAT 2049

Db       1973 TTGGACATCCTGAATGGATAGATTTTCCAAGAGGTCCGCAAAGACTTCCAAGTGGTAAGT 2032

Qy       2050 TTGTTCCTGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATT 2109

Db       2033 TTATTCCAGGGAATAACAACAGTTATGACAAATGTCGTCGAAGATTTGACCTGGGTGATG 2092

Qy       2110 CAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAG 2169

Db       2093 CAGACTATCTTAGGTATCATGGTATGCAAGAGTTTGATCAGGCAATGCAACATCTTGAGC 2152

Qy       2170 AAGCCTATGGTTTCATGACTTCTGAGCACCAATACATATCACGGAAGGATGAAAGGGATC 2229

Db       2153 AAAAATATGAATTCATGACATCTGATCACCAGTATATTTCCCGGAAACATGAGGAGGATA 2212

Qy       2230 GGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGTATTCAATTTTCATTGGACTAGCA 2289

Db       2213 AGGTGATTGTGTTCGAAAAGGGAGATTTGGTATTTGTGTTCAACTTCCACTGCAACAACA 2272

Qy       2290 GCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAGATAGTCTTGGATT 2349

Db       2273 GCTATTTTGACTACCGTATTGGTTGTCGAAAGCCTGGGGTGTATAAGGTGGTCTTGGACT 2332

Qy       2350 CAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAGTCATGATGCAGAGCACTTCAGCT 2409

Db       2333 CCGACGCTGGACTATTTGGTGGATTTAGCAGGATCCATCACGCAGCCGAGCACTTCACCG 2392

Qy       2410 TTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCATGGTGTACACACCATGTAGAACAG 2469

Db       2393 CCGACTGTTCGCATGATAATAGGCCATATTCATCCTCGGTTTATACACCAAGCAGAACAT 2452

Qy       2470 CAGTGGTCTATGCTTTAGTGGAG 2492

Db       2453 GTGTCGTCTATGCTCCAGTGGAG 2475


RESULT 6
US-08-941-445A-14
; Sequence 14, Application US/08941445A
; Patent No. 6107060
;  GENERAL INFORMATION:
;    APPLICANT:  Keeling, Peter
;    APPLICANT:  Guan, Hanping
;    TITLE OF INVENTION:  Starch Encapsulation
;    NUMBER OF SEQUENCES:  37
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Greenlee, Winner and Sullivan, P.C.
;      STREET:  5370 Manhattan Circle
;      CITY:  Boulder
;      STATE:  CO
;      COUNTRY:  US
;      ZIP:  80303
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/941,445A
;      FILING DATE:  30-SEP-1997
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/026,855
;      FILING DATE:  30-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Winner, Ellen P
;      REGISTRATION NUMBER:  28,547
;      REFERENCE/DOCKET NUMBER:  89-97
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 499-8080
;      TELEFAX:  (303) 499-8089
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2725 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  not relevant
;    MOLECULE TYPE:  mRNA
;    HYPOTHETICAL:  NO
;    ORIGINAL SOURCE:
;      ORGANISM:  Zea mays
;    FEATURE:
;      NAME/KEY:  sig_peptide
;      LOCATION:  91..264
;    FEATURE:
;      NAME/KEY:  mat_peptide
;      LOCATION:  265..2487
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  91..2490
US-08-941-445A-14

  Query Match             48.4%;  Score 1251.8;  DB 3;  Length 2725;
  Best Local Similarity   75.4%;  Pred. No. 0;
  Matches 1556;  Conservative    0;  Mismatches  507;  Indels    0;  Gaps    0;

Qy       430 TTCCTCCACCCGGCAGAGGGCAAAGAATATATGACATAGATCCAAGCTTGACAGGCTTTC 489

Db       425 TCCCCCCACCAAGCGATGGACAAAAAATATTCCAGATTGACCCCATGTTGCAAGGCTATA 484

Qy       490 GTCAACACCTAGATTACCGGTATTCACAGTACAAAAGACTCCGAGAAGAAATTGACAAGT 549

Db       485 AGTACCATCTTGAGTATCGGTACAGCCTCTATAGAAGAATCCGTTCAGACATTGATGAAC 544

Qy       550 ATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTG 609

Db       545 ATGAAGGAGGCTTGGAAGCCTTCTCCCGTAGTTATGAGAAGTTTGGATTTAATGCCAGCG 604

Qy       610 AAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGCTACGTGGGCTGCATTGATTGGAG 669

Db       605 CGGAAGGTATCACATATCGAGAATGGGCTCCTGGAGCATTTTCTGCAGCATTGGTGGGTG 664

Qy       670 ATTTCAATAACTGGAATCCTAATGCAGATGTCATGACTCAGAATGAGTGTGGTGTCTGGG 729

Db       665 ACGTCAACAACTGGGATCCAAATGCAGATCGTATGAGCAAAAATGAGTTTGGTGTTTGGG 724

Qy       730 AGATCTTTTTGCCGAATAATGCAGATGGTTCACCACCAATTCCCCATGGTTCTCGAGTAA 789

Db       725 AAATTTTTCTGCCTAACAATGCAGATGGTACATCACCTATTCCTCATGGATCTCGTGTAA 784

Qy       790 AGATACGCATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTGGATCAAGTTCT 849

Db       785 AGGTGAGAATGGATACTCCATCAGGGATAAAGGATTCAATTCCAGCCTGGATCAAGTACT 844

Qy       850 CAGTTCAAGCACCAGGTGAACTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGG 909

Db       845 CAGTGCAGGCCCCAGGAGAAATACCATATGATGGGATTTATTATGATCCTCCTGAAGAGG 904

Qy       910 AGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGT 969

Db       905 TAAAGTATGTGTTCAGGCATGCGCAACCTAAACGACCAAAATCATTGCGGATATATGAAA 964
```

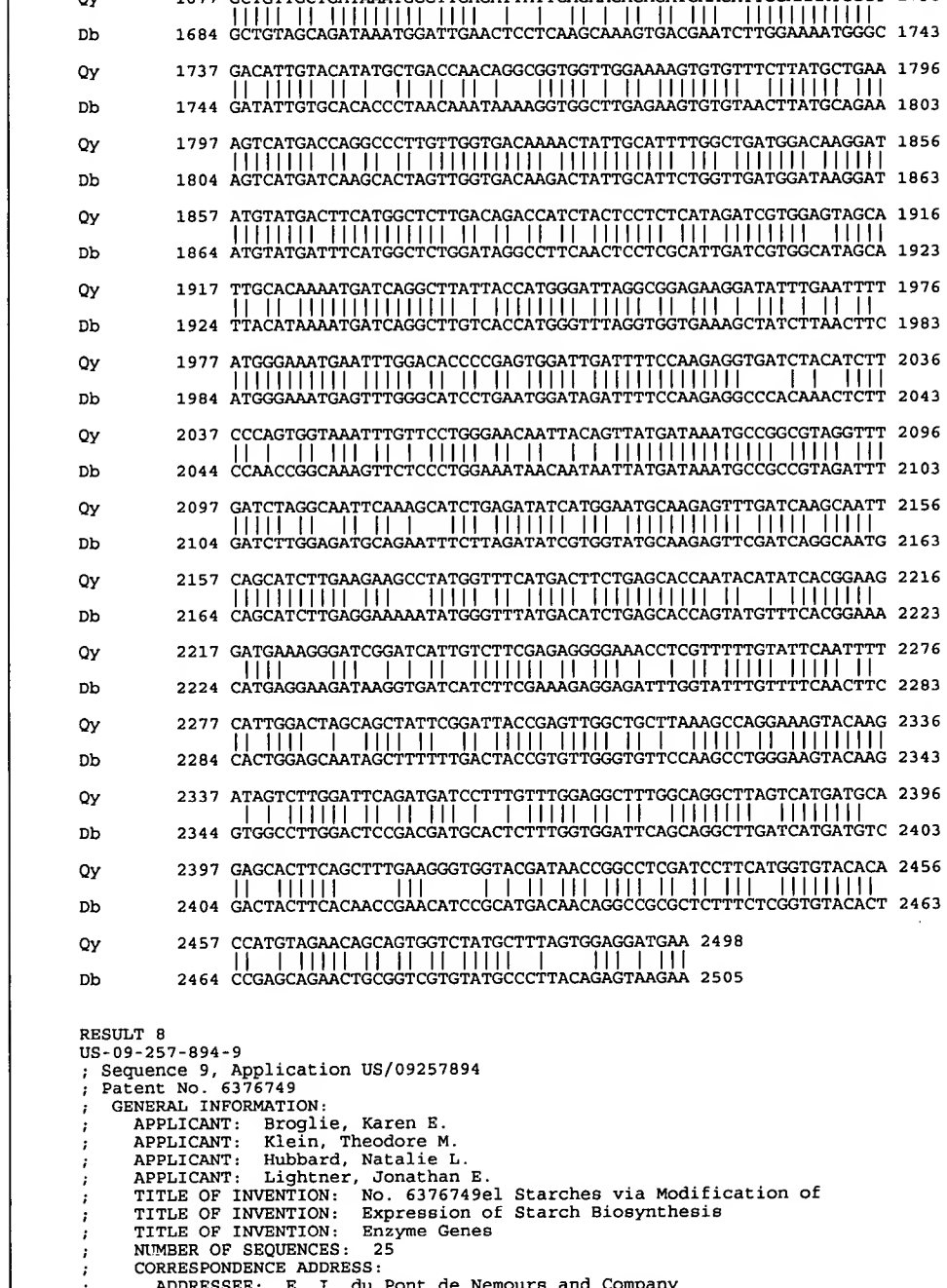
```
Qy        970 CGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATG 1029
Db        965 CACATGTCGGAATGAGTAGCCCGGAACCGAAGATAAACACATATGTAAACTTTAGGGATG 1024

Qy       1030 ATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAG 1089
Db       1025 AAGTCCTCCCAAGAATAAAAAAACTTGGATACAATGCAGTGCAAATAATGGCAATCCAAG 1084

Qy       1090 AGCATTCATATTATGCTAGTTTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCC 1149
Db       1085 AGCACTCATATTATGGAAGCTTTGGATACCATGTAACTAATTTTTTTGCGCCAAGTAGTC 1144

Qy       1150 GATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTC 1209
Db       1145 GTTTTGGTACCCCAGAAGATTTGAAGTCTTTGATTGATAGAGCACATGAGCTTGGTTTGC 1204

Qy       1210 TTGTTCTCATGGATATTGTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATA 1269
Db       1205 TAGTTCTCATGGATGTGGTTCATAGTCATGCGTCAAGTAATACTCTGGATGGGTTGAATG 1264

Qy       1270 TGTTTGATGGTACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGT 1329
Db       1265 GTTTTGATGGTACAGATACACATTACTTTCACAGTGGTCCACGTGGCCATCACTGGATGT 1324

Qy       1330 GGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATG 1389
Db       1325 GGGATTCTCGCCTATTTAACTATGGGAACTGGGAAGTTTTAAGATTTCTTCTCTCCAATG 1384

Qy       1390 CAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAA 1449
Db       1385 CTAGATGGTGGCTCGAGGAATATAAGTTTGATGGTTTCCGTTTTGATGGTGTGACCTCCA 1444

Qy       1450 TGATGTACACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTG 1509
Db       1445 TGATGTACACTCACCACGGATTACAAGTAACATTTACGGGGAACTTCAATGAGTATTTTG 1504

Qy       1510 GATATGCAACTGATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATG 1569
Db       1505 GCTTTGCCACCGATGTAGATGCAGTGGTTTACTTGATGCTGGTAAATGATCTAATTCATG 1564

Qy       1570 GTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCA 1629
Db       1565 GACTTTATCCTGAGGCTGTAACCATTGGTGAAGATGTTAGTGGAATGCCTACATTTGCCC 1624

Qy       1630 TTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATA 1689
Db       1625 TTCCTGTTCACGATGGTGGGGTAGGTTTTGACTATCGGATGCATATGGCTGTGGCTGACA 1684

Qy       1690 AATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATA 1749
Db       1685 AATGGATTGACCTTCTCAAGCAAAGTGATGAAACTTGGAAGATGGGTGATATTGTGCACA 1744

Qy       1750 TGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGG 1809
Db       1745 CACTGACAAATAGGAGGTGGTTAGAGAAGTGTGTAACTTATGCTGAAAGTCATGATCAAG 1804

Qy       1810 CCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCA 1869
Db       1805 CATTAGTCGGCGACAAGACTATTGCGTTTTGGTTGATGGACAAGGATATGTATGATTTCA 1864

Qy       1870 TGGCTCTTGACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGA 1929
Db       1865 TGGCCCTCGATAGACCTTCAACTCCTACCATTGATCGTGGGATAGCATTACATAAGATGA 1924

Qy       1930 TCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAAT 1989
Db       1925 TTAGACTTATCACAATGGGTTTAGGAGGAGAGGGCTATCTTAATTTCATGGGAAATGAGT 1984

Qy       1990 TTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAAT 2049
Db       1985 TTGGACATCCTGAATGGATAGATTTTCCAAGAGGTCCGCAAAGACTTCCAAGTGGTAAGT 2044

Qy       2050 TTGTTCCTGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATT 2109
Db       2045 TTATTCCAGGGAATAACAACAGTTATGACAAATGTCGTCGAAGATTTGACCTGGGTGATG 2104

Qy       2110 CAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAG 2169
Db       2105 CAGACTATCTTAGGTATCATGGTATGCAAGAGTTTGATCAGGCAATGCAACATCTTGAGC 2164

Qy       2170 AAGCCTATGGTTTCATGACTTCTGAGCACCAATACATATCACGGAAGGATGAAAGGGATC 2229
Db       2165 AAAAATATGAATTCATGACATCTGATCACCAGTATATTTCCCGGAAACATGAGGAGGATA 2224

Qy       2230 GGATCATTGTCTTCGAGAGGGGAAACCTCGTTTTTGTATTCAATTTTCATTGGACTAGCA 2289
Db       2225 AGGTGATTGTGTTCGAAAAGGGAGATTTGGTATTTGTGTTCAACTTCCACTGCAACAACA 2284

Qy       2290 GCTATTCGGATTACCGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAGATAGTCTTGGATT 2349
Db       2285 GCTATTTTGACTACCGTATTGGTTGTCGAAAGCCTGGGGTGTATAAGGTGGTCTTGGACT 2344

Qy       2350 CAGATGATCCTTTGTTTGGAGGCTTTGGCAGGCTTAGTCATGATGCAGAGCACTTCAGCT 2409
Db       2345 CCGACGCTGGACTATTTGGTGGATTTAGCAGGATCCATCACGCAGCCGAGCACTTCACCG 2404

Qy       2410 TTGAAGGGTGGTACGATAACCGGCCTCGATCCTTCATGGTGTACACACCATGTAGAACAG 2469
Db       2405 CCGACTGTTCGCATGATAATAGGCCATATTCATTCTCGGTTTATACACCAAGCAGAACAT 2464

Qy       2470 CAGTGGTCTATGCTTTAGTGGAG 2492
Db       2465 GTGTCGTCTATGCTCCAGTGGAG 2487
```

RESULT 7
US-09-609-040-3
; Sequence 3, Application US/09609040
; Patent No. 6570066
; GENERAL INFORMATION:
; APPLICANT: Willmitzer, et al.
; TITLE OF INVENTION: NUCLEOTIDE SEQUENCES ENCODING ENZYMES THAT ALTER THE CARBOHYDRATE
; TITLE OF INVENTION: CONCENTRATION AND COMPOSITION IN PLANTS
; FILE REFERENCE: 514413-3515.1
; CURRENT APPLICATION NUMBER: US/09/609,040
; CURRENT FILING DATE: 2000-06-30
; PRIOR APPLICATION NUMBER: PCT/EP92/00302
; PRIOR FILING DATE: 1992-02-11
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 2853
; TYPE: DNA
; ORGANISM: Triticum aestivum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (313)..(2499)
; OTHER INFORMATION: BRANCHING ENZYME
US-09-609-040-3

Query Match 48.1%; Score 1245.2; DB 4; Length 2853;
Best Local Similarity 74.9%; Pred. No. 0;
Matches 1559; Conservative 0; Mismatches 523; Indels 0; Gaps 0;

```
Qy        417 AAACCAAGGTCCATTCCTCCACCCGGCAGAGGGCAAAGAATATATGACATAGATCCAAGC 476
Db        424 AAACCGCGAGTTGTCCCAAAACCAGGAGATGGGCAGAAAATATACGAGATTGACCCAACA 483

Qy        477 TTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCACAGTACAAAAGACTCCGAGAA 536
Db        484 CTGAAAGATTTTCGGAGCCATCTTGACTACCGATACCGCGAATACAAGAGAATTCGTGCT 543

Qy        537 GAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAGTTTGGT 596
Db        544 GCTATTGACCAACATGAAGGTGGATTGGAAGCATTTTCTCGTGGTTATGAAAAGCTTGGA 603
```





RESULT 8
US-09-257-894-9
; Sequence 9, Application US/09257894
; Patent No. 6376749
; GENERAL INFORMATION:
; APPLICANT: Broglie, Karen E.
; APPLICANT: Klein, Theodore M.
; APPLICANT: Hubbard, Natalie L.
; APPLICANT: Lightner, Jonathan E.
; TITLE OF INVENTION: No. 6376749el Starches via Modification of
; TITLE OF INVENTION: Expression of Starch Biosynthesis
; TITLE OF INVENTION: Enzyme Genes
; NUMBER OF SEQUENCES: 25
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E. I. du Pont de Nemours and Company
; STREET: 1007 Market Street

```
;       CITY:  Wilmington
;       STATE:  Delaware
;       COUNTRY:  USA
;       ZIP:  19898
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  Microsoft Windows 95
;       SOFTWARE:  Version 7.0A
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/257,894
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  09/091,052
;       FILING DATE:  JUNE 10, 1998
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Majarian, William R.
;       REGISTRATION NUMBER:  41,173
;       REFERENCE/DOCKET NUMBER:  BB-1066-A
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  302-992-4926
;       TELEFAX:  302-773-0164
;   INFORMATION FOR SEQ ID NO:  9:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  2087 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
US-09-257-894-9

  Query Match             42.4%;  Score 1097;  DB 4;  Length 2087;
  Best Local Similarity   76.6%;  Pred. No. 0;
  Matches 1343;  Conservative    0;  Mismatches  410;  Indels    0;  Gaps    0;

Qy        430 TTCCTCCACCCGGCAGAGGGCAAAGAATATATGACATAGATCCAAGCTTGACAGGCTTTC 489
              | || |||||  ||   || |||| |||||   | ||| || || |  |||  |||||| |
Db        335 TCCCCCCACCAAGCGATGGACAAAAAATATTCCAGATTGACCCCATGTTGCAAGGCTATA 394

Qy        490 GTCAACACCTAGATTACCGGTATTCACAGTACAAAAGACTCCGAGAAGAAATTGACAAGT 549
                | || || || || |||||     |  || | |||| ||||   ||| |||||  |
Db        395 AGTACCATCTTGAGTATCGGTACAGCCTCTATAGAAGAATCCGTTCAGACATTGATGAAC 454

Qy        550 ATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTG 609
              |||||||  |  |||| || || || ||| | ||||| |||||||| ||      ||| |
Db        455 ATGAAGGAGGCTTGGAAGCCTTCTCCCGTAGTTATGAGAAGTTTGGATTTAATGCCAGCG 514

Qy        610 AAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGCTACGTGGGCTGCATTGATTGGAG 669
                ||| || || ||| |||| ||||| || |||||     || |||||| | || |
Db        515 CGGAAGGTATCACATATCGAGAATGGGCTCCTGGAGCATTTTCTGCAGCATTGGTGGGTG 574

Qy        670 ATTTCAATAACTGGAATCCTAATGCAGATGTCATGACTCAGAATGAGTGTGGTGTCTGGG 729
              | ||||| |||||| |||| |||||||||    ||||   | |||||| |||||| ||||
Db        575 ACTTCAACAACTGGGATCCAAATGCAGATCGTATGAGCAAAAATGAGTTTGGTGTTTGGG 634

Qy        730 AGATCTTTTTGCCGAATAATGCAGATGGTTCACCACCAATTCCCCATGGTTCTCGAGTAA 789
              | || ||| |||| || |||||||||||| || |||| |||||  |||||  ||||  ||||
Db        635 AAATTTTTCTGCCTAACAATGCAGATGGTACATCACCTATTCCTCATGGATCTCGTGTAA 694

Qy        790 AGATACGCATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTGGATCAAGTTCT 849
              || |  | ||||||||||||||| || |  || ||||| |||| || |||||||||  ||
Db        695 AGGTGAGAATGGATACTCCATCAGGGATAAAGGATTCAATTCCAGCCTGGATCAAGTACT 754

Qy        850 CAGTTCAAGCACCAGGTGAACTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGG 909
              |||| || || ||||| ||| | |||||| |||| || || |||||||||| || ||||
Db        755 CAGTGCAGGCCCCAGGAGAAATACCATATGATGGGATTTATTATGATCCTCCTGAAGAGG 814

Qy        910 AGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGT 969
                ||||||||||||   || | || || ||  |||||||||| | ||||| |||||
Db        815 TAAAGTATGTGTTCAGGCATGCGCAACCTAAACGACCAAAATCATTGCGGATATATGAAA 874

Qy        970 CGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATG 1029
```

```
                | || || |||||||||||  |||| ||     || ||||||||||  |||||||| ||||
Db        875 CACATGTCGGAATGAGTAGCCCGGAACCGAAGATAAACACATATGTAAACTTTAGGGATG 934

Qy       1030 ATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAG 1089
              | || || ||  | || ||||| ||||| |||||||| || ||  | ||||| || ||||
Db        935 AAGTCCTCCCAAGAATAAAAAAACTTGGATACAATGCAGTGCAAATAATGGCAATCCAAG 994

Qy       1090 AGCATTCATATTATGCTAGTTTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCC 1149
              |||| |||||||||||  || ||||| || || || || || |||| |||  | || || |
Db        995 AGCACTCATATTATGGAAGCTTTGGATACCATGTAACTAATTTTTTTGCGCCAAGTAGTC 1054

Qy       1150 GATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTC 1209
              | ||||| || || || ||||| |||||| | || |||| ||| || ||| | ||| | |
Db       1055 GTTTTGGTACCCCAGAAGATTTGAAGTCTTTGATTGATAGAGCACATGAGCTTGGTTTGC 1114

Qy       1210 TTGTTCTCATGGATATTGTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATA 1269
              | |||||||||||| | |||||||| |||| |||| ||||||  |||||||| |||||
Db       1115 TAGTTCTCATGGATGTGGTTCATAGTCATGCGTCAAGTAATACTCTGGATGGGTTGAATG 1174

Qy       1270 TGTTTGATGGTACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGT 1329
                |||||||||| |||    || |||||||||  ||| ||||| || ||||| |||||||
Db       1175 GTTTTGATGGTACAGATACACATTACTTTCACAGTGGTCCACGTGGCCATCACTGGATGT 1234

Qy       1330 GGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATG 1389
              |||| |||||||| || |||||||||| |||||| ||| |||| |||||||| || ||||
Db       1235 GGGATTCTCGCCTATTTAACTATGGGAACTGGGAAGTTTTAAGATTTCTTCTCTCCAATG 1294

Qy       1390 CAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAA 1449
              | || |||||| | || || || |||||||||| ||| | |||||||| ||||| || |
Db       1295 CTAGATGGTGGCTCGAGGAATATAAGTTTGATGGTTTCCGTTTTGATGGTGTGACCTCCA 1354

Qy       1450 TGATGTACACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTG 1509
              |||||||||| || || ||||| || |||   ||||| || |||| |||||| || ||||
Db       1355 TGATGTACACTCACCACGGATTACAAGTAACATTTACGGGGAACTTCAATGAGTATTTTG 1414

Qy       1510 GATATGCAACTGATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATG 1569
              | | ||| || |||||||||| |||||||| |||||||| | |||||| | |||||||
Db       1415 GCTTTGCCACCGATGTAGATGCAGTGGTTTACTTGATGCTGGTAAATGATCTAATTCATG 1474

Qy       1570 GTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCA 1629
              | ||  || |||||||||||||||||||||||||||||||||||||||||| ||| ||  |
Db       1475 GACTTTATCCTGAGGCTGTAACCATTGGTGAAGATGTTAGTGGAATGCCTACATTTGCCC 1534

Qy       1630 TTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATA 1689
              |||| ||| | |||||||| || || ||||| |||||  | || |||||||| ||||| |
Db       1535 TTCCTGTTCACGATGGTGGGGTAGGTTTTGACTATCGGATGCATATGGCTGTGGCTGACA 1594

Qy       1690 AATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATA 1749
              ||||| |||  || |  || | || ||||||  |||||| |||||||| ||||| || |
Db       1595 AATGGATTGACCTTCTCAAGCAAAGTGATGAAACTTGGAAGATGGGTGATATTGTGCACA 1654

Qy       1750 TGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGG 1809
                ||||| || ||| |||||||| |||||||| |||||||||||||||||||||| || |
Db       1655 CACTGACAAATAGGAGGTGGTTAGAGAAGTGTGTAACTTATGCTGAAAGTCATGATCAAG 1714

Qy       1810 CCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCA 1869
              |  | || || ||||| |||||||| |||||| |||||||||||||||||||||| ||||
Db       1715 CATTAGTCGGCGACAAGACTATTGCGTTTTGGTTGATGGACAAGGATATGTATGATTTCA 1774

Qy       1870 TGGCTCTTGACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGA 1929
              |||| || || ||||| || ||||||  ||| ||||||||  |||||||| || || ||||
Db       1775 TGGCCCTCGATAGACCTTCAACTCCTACCATTGATCGTGGGATAGCATTACATAAGATGA 1834

Qy       1930 TCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAAT 1989
              | || ||||| || ||||| ||||| ||||| || ||| | ||||| ||||||||||| |
Db       1835 TTAGACTTATCACAATGGGTTTAGGAGGAGAGGGCTATCTTAATTTCATGGGAAATGAGT 1894

Qy       1990 TTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAAT 2049
              ||||||| || || ||||| ||||||||||||||||    | |    ||||| |||||||
Db       1895 TTGGACATCCTGAATGGATAGATTTTCCAAGAGGTCCGCAAAGACTTCCAAGTGGTAAGT 1954

Qy       2050 TTGTTCCTGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATT 2109
              || |||| ||||| ||  |||||||||| ||||| || || || ||||| || ||  ||
```

```
Db       1955 TTATTCCAGGGAATAACAACAGTTATGACAAATGTCGTCGAAGATTTGACCTGGGTGATG 2014

Qy       2110 CAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAG 2169

Db       2015 CAGACTATCTTAGGTATCATGGTATGCAAGAGTTTGATCAGGCAATGCAACATCTTGAGC 2074

Qy       2170 AAGCCTATGGTTT 2182

Db       2075 AAAAATATGAATT 2087


RESULT 9
US-09-257-894-8/c
; Sequence 8, Application US/09257894
; Patent No. 6376749
;  GENERAL INFORMATION:
;    APPLICANT:  Broglie, Karen E.
;    APPLICANT:  Klein, Theodore M.
;    APPLICANT:  Hubbard, Natalie L.
;    APPLICANT:  Lightner, Jonathan E.
;    TITLE OF INVENTION:  No. 6376749el Starches via Modification of
;    TITLE OF INVENTION:  Expression of Starch Biosynthesis
;    TITLE OF INVENTION:  Enzyme Genes
;    NUMBER OF SEQUENCES:  25
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  E. I. du Pont de Nemours and Company
;      STREET:  1007 Market Street
;      CITY:  Wilmington
;      STATE:  Delaware
;      COUNTRY:  USA
;      ZIP:  19898
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  Microsoft Windows 95
;      SOFTWARE:  Version 7.0A
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/257,894
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  09/091,052
;      FILING DATE:  JUNE 10, 1998
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Majarian, William R.
;      REGISTRATION NUMBER:  41,173
;      REFERENCE/DOCKET NUMBER:  BB-1066-A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  302-992-4926
;      TELEFAX:  302-773-0164
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2165 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-09-257-894-8

  Query Match             42.3%;  Score 1095.4;  DB 4;  Length 2165;
  Best Local Similarity   76.6%;  Pred. No. 0;
  Matches 1342;  Conservative    0;  Mismatches  411;  Indels    0;  Gaps    0;

Qy        430 TTCCTCCACCCGGCAGAGGGCAAAGAATATATGACATAGATCCAAGCTTGACAGGCTTTC 489

Db       1753 TCCCCCCACCAAGCGATGGACAAAAAATATTCCAGATTGACCCCATGTTGCAAGGCTATA 1694

Qy        490 GTCAACACCTAGATTACCGGTATTCACAGTACAAAAGACTCCGAGAAGAAATTGACAAGT 549

Db       1693 AGTACCATCTTGAGTATCGGTACAGCCTCTATAGAAGAATCCGTTCAGACATTGATGAAC 1634

Qy        550 ATGAAGGTAGTCTGGATGCATTTTCTCGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTG 609

Db       1633 ATGAAGGAGGCTTGGAAGCCTTCTCCCGTAGTTATGAGAAGTTTGGATTTAATGCCAGCG 1574

Qy        610 AAACAGGAATAACTTATAGAGAGTGGGCACCAGGAGCTACGTGGGCTGCATTGATTGGAG 669

Db       1573 CGGAAGGTATCACATATCGAGAATGGGCTCCTGGAGCATTTTCTGCAGCATTGGTGGGTG 1514

Qy        670 ATTTCAATAACTGGAATCCTAATGCAGATGTCATGACTCAGAATGAGTGTGGTGTCTGGG 729

Db       1513 ACGTCAACAACTGGGATCCAAATGCAGATCGTATGAGCAAAAATGAGTTTGGTGTTTGGG 1454

Qy        730 AGATCTTTTTGCCGAATAATGCAGATGGTTCACCACCAATTCCCCATGGTTCTCGAGTAA 789

Db       1453 AAATTTTTCTGCCTAACAATGCAGATGGTACATCACCTATTCCTCATGGATCTCGTGTAA 1394

Qy        790 AGATACGCATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTGGATCAAGTTCT 849

Db       1393 AGGTGAGAATGGATACTCCATCAGGGATAAAGGATTCAATTCCAGCCTGGATCAAGTACT 1334

Qy        850 CAGTTCAAGCACCAGGTGAACTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGG 909

Db       1333 CAGTGCAGGCCCCAGGAGAAATACCATATGATGGGATTTATTATGATCCTCCTGAAGAGG 1274

Qy        910 AGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGT 969

Db       1273 TAAAGTATGTGTTCAGGCATGCGCAACCTAAACGACCAAAATCATTGCGGATATATGAAA 1214

Qy        970 CGCACGTTGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATG 1029

Db       1213 CACATGTCGGAATGAGTAGCCCGGAACCGAAGATAAACACATATGTAAACTTTAGGGATG 1154

Qy       1030 ATGTGCTTCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAG 1089

Db       1153 AAGTCCTCCCAAGAATAAAAAAACTTGGATACAATGCAGTGCAAATAATGGCAATCCAAG 1094

Qy       1090 AGCATTCATATTATGCTAGTTTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCC 1149

Db       1093 AGCACTCATATTATGGAAGCTTTGGATACCATGTAACTAATTTTTTTGCGCCAAGTAGTC 1034

Qy       1150 GATTTGGAACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTC 1209

Db       1033 GTTTTGGTACCCCAGAAGATTTGAAGTCTTTGATTGATAGAGCACATGAGCTTGGTTTGC 974

Qy       1210 TTGTTCTCATGGATATTGTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATA 1269

Db        973 TAGTTCTCATGGATGTGGTTCATAGTCATGCGTCAAGTAATACTCTGGATGGGTTGAATG 914

Qy       1270 TGTTTGATGGTACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGT 1329

Db        913 GTTTTGATGGTACAGATACACATTACTTTCACAGTGGTCCACGTGGCCATCACTGGATGT 854

Qy       1330 GGGACTCTCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATG 1389

Db        853 GGGATTCTCGCCTATTTAACTATGGGAACTGGGAAGTTTTAAGATTTCTTCTCTCCAATG 794

Qy       1390 CAAGGTGGTGGTTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAA 1449

Db        793 CTAGATGGTGGCTCGAGGAATATAAGTTTGATGGTTTCCGTTTTGATGGTGTGACCTCCA 734

Qy       1450 TGATGTACACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTG 1509

Db        733 TGATGTACACTCACCACGGATTACAAGTAACATTTACGGGGAACTTCAATGAGTATTTTG 674

Qy       1510 GATATGCAACTGATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATG 1569

Db        673 GCTTTGCCACCGATGTAGATGCAGTGGTTTACTTGATGCTGGTAAATGATCTAATTCATG 614

Qy       1570 GTCTCTTCCCAGAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCA 1629

Db        613 GACTTTATCCTGAGGCTGTAACCATTGGTGAAGATGTTAGTGGAATGCCTACATTTGCCC 554

Qy       1630 TTCCGGTTGAAGATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATA 1689

Db        553 TTCCTGTTCACGATGGTGGGGTAGGTTTTGACTATCGGATGCATATGGCTGTGGCTGACA 494
```

```
Qy       1690 AATGGGTTGAGATTATTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATA 1749
Db        493 AATGGATTGACCTTCTCAAGCAAAGTGATGAAACTTGGAAGATGGGTGATATTGTGCACA 434

Qy       1750 TGCTGACCAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGG 1809
Db        433 CACTGACAAATAGGAGGTGGTTAGAGAAGTGTGTAACTTATGCTGAAAGTCATGATCAAG 374

Qy       1810 CCCTTGTTGGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCA 1869
Db        373 CATTAGTCGGCGACAAGACTATTGCGTTTTGGTTGATGGACAAGGATATGTATGATTTCA 314

Qy       1870 TGGCTCTTGACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGA 1929
Db        313 TGGCCCTCGATAGACCTTCAACTCCTACCATTGATCGTGGGATAGCATTACATAAGATGA 254

Qy       1930 TCAGGCTTATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAAT 1989
Db        253 TTAGACTTATCACAATGGGTTTAGGAGGAGAGGGCTATCTTAATTTCATGGGAAATGAGT 194

Qy       1990 TTGGACACCCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAAT 2049
Db        193 TTGGACATCCTGAATGGATAGATTTTCCAAGAGGTCCGCAAAGACTTCCAAGTGGTAAGT 134

Qy       2050 TTGTTCCTGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATT 2109
Db        133 TTATTCCAGGGAATAACAACAGTTATGACAAATGTCGTCGAAGATTTGACCTGGGTGATG 74

Qy       2110 CAAAGCATCTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAG 2169
Db          73 CAGACTATCTTAGGTATCATGGTATGCAAGAGTTTGATCAGGCAATGCAACATCTTGAGC 14

Qy       2170 AAGCCTATGGTTT 2182
Db          13 AAAAATATGAATT 1
```

RESULT 10
US-09-087-277-3
; Sequence 3, Application US/09087277B
; Patent No. 6169226
; GENERAL INFORMATION:
; APPLICANT: EK, Bo
; APPLICANT: KHOSNOODI, Jamshid
; APPLICANT: LARSSON, Clas-Tomas
; APPLICANT: LARSSON, Hakan
; APPLICANT: RASK, Lars
; TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
; FILE REFERENCE: 003300-486
; CURRENT APPLICATION NUMBER: US/09/087,277B
; CURRENT FILING DATE: 1998-05-29
; EARLIER APPLICATION NUMBER: PCT/SE96/01558
; EARLIER FILING DATE: 1996-11-28
; EARLIER APPLICATION NUMBER: SE 9504272-7
; EARLIER FILING DATE: 1995-11-29
; EARLIER APPLICATION NUMBER: SE 9601506-0
; EARLIER FILING DATE: 1996-04-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 1393
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism:beII gene fragment
; OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
; OTHER INFORMATION: (potato)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (2)..(1393)
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (424)..(1150)
; OTHER INFORMATION: Nucleotides 424, 891 and 1150 are n wherein n = A,
; OTHER INFORMATION: C, G or T.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (422)..(424)
; OTHER INFORMATION: Amino acid 141 is Xaa wherein Xaa = Thr.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (890)..(892)
; OTHER INFORMATION: Amino acid 297 is Xaa wherein Xaa = Tyr, Ser, Cys
; OTHER INFORMATION: or Phe.
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1148)..(1150)
; OTHER INFORMATION: Amino acid 383 is Xaa wherein Xaa = Pro.
US-09-087-277-3

Query Match 36.6%; Score 947.4; DB 3; Length 1393;
Best Local Similarity 79.9%; Pred. No. 1.7e-298;
Matches 1113; Conservative 0; Mismatches 280; Indels 0; Gaps 0;

```
Qy        737 TTTGCCGAATAATGCAGATGGTTCACCACCAATTCCCCATGGTTCTCGAGTAAAGATACG 796
Db          1 TCTGCCAAATAATGTGGATGGTTCTCCTGCAATTCCTCATGGGTCCAGAGTGAAGATACG 60

Qy        797 CATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTGGATCAAGTTCTCAGTTCA 856
Db         61 TATGGACACTCCATCAGGTGTTAAGGATTCCATTCCTGCTTGGATCAACTACTCTTTACA 120

Qy        857 AGCACCAGGTGAACTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGGAGAAGTA 916
Db        121 GCTTCCTGATGAAATTCCATATAATGGAATATATTATGATCCACCCGAAGAGGAGAGGTA 180

Qy        917 TGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGTCGCACGT 976
Db        181 TATCTTCCAACACCCACGGCCAAAGAAACCAAAGTCGCTGAGAATATATGAATCTCATAT 240

Qy        977 TGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCT 1036
Db        241 TGGAATGAGTAGTCCGGAGCCTAAAATTAACTCATACGTGAATTTTAGAGATGAAGTTCT 300

Qy       1037 TCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAGAGCATTC 1096
Db        301 TCCTCGCATAAAAAAGCTTGGGTACAATGCGGTGCAAATTATGGCTATTCAAGAGCATTC 360

Qy       1097 ATATTATGCTAGTTTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCCGATTTGG 1156
Db        361 TTATTATGCTAGTTTTGGTTATCATGTCACAAATTTTTTNGCACCAAGCAGCCGTTTTGA 420

Qy       1157 AACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCT 1216
Db        421 AACNCCCGACGACCTTAAGTCTTTGATTGATAAAGCTCATGAGCTAGGAATTGTTGTTCT 480

Qy       1217 CATGGATATTGTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATATGTTTGA 1276
Db        481 CATGGACATTGTTCACAGCCATGCATCAAATAATACTTTAGATGGACTGAACATGTTTGA 540

Qy       1277 TGGTACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGTGGGACTC 1336
Db        541 CGGCACAGATAGTTGTTACTTTCACTCTGGAGCTCGTGGTTATCATTGGATGTGGGATTC 600

Qy       1337 TCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATGCAAGGTG 1396
Db        601 CCGCCTCTTTAACTATGGAAACTGGGAGGTACTTAGGTATCTTCTCTCAAATGCGAGATG 660

Qy       1397 GTGGTTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAATGATGTA 1456
Db        661 GTGGTTGGATGAGTTCAAATTTGATGGATTTAGATTTGATGGTGTGACATCAATGATGTA 720

Qy       1457 CACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTGGATATGC 1516
Db        721 TACTCACCACGGATTATCGGTGGGATTCACTGGGAACTACGAGGAATACTTTGGACTCGC 780
```

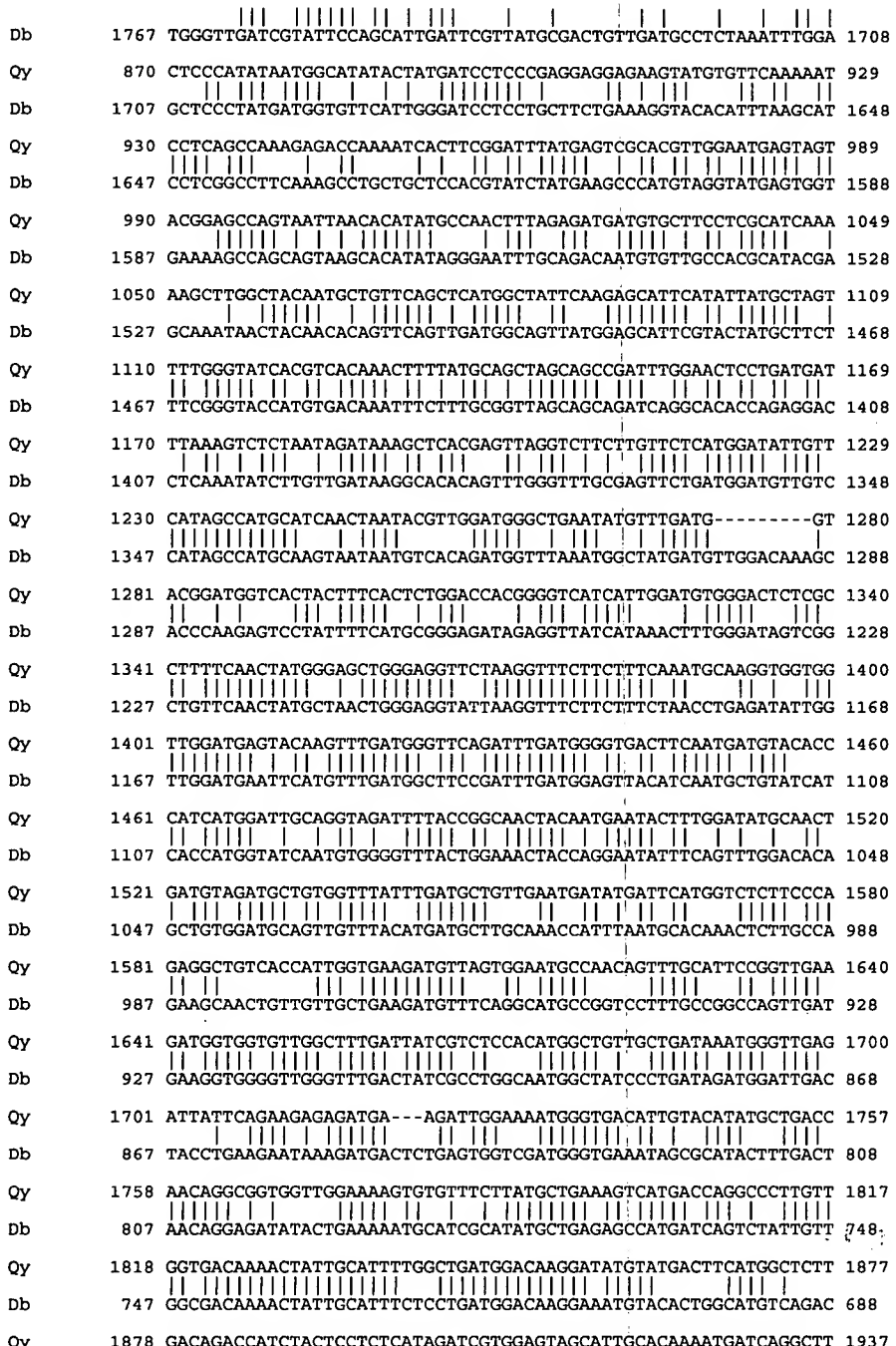
```
Qy       1517 AACTGATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATGGTCTCTT 1576
Db        781 AACTGATGTGGATGCTGTTGTGTATCTGATGCTGGTCAACGATCTTATTCATGGGCTTTT 840

Qy       1577 CCCAGAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCATTCCGGT 1636
Db        841 CCCAGATGCAATTACCATTGGTGAAGATGTTAGCGGAATGCCGACATTTTNTATTCCCGT 900

Qy       1637 TGAAGATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATAAATGGGT 1696
Db        901 TCAAGATGGGGGTGTTGGCTTTGACTATCGGCTGCATATGGCAATTGCTGATAAATGGAT 960

Qy       1697 TGAGATTATTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATATGCTGAC 1756
Db        961 TGAGTTGCTCAAGAAACGGGATGAGGATTGGAGAGTGGGTGATATTGTTCATACACTGAC 1020

Qy       1757 CAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGGCCCTTGT 1816
Db        1021 AAATAGAAGATGGTCGGAAAAGTGTGTTTCATACGCTGAAAGTCATGATCAAGCTCTAGT 1080

Qy       1817 TGGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCATGGCTCT 1876
Db        1081 CGGTGATAAAACTATAGCATTCTGGCTGATGGACAAGGATATGTATGATTTTATGGCTCT 1140

Qy       1877 TGACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCT 1936
Db        1141 GGATAGACCNTCAACATCATTAATAGATCGTGGGATAGCATTGCACAAGATGATTAGGCT 1200

Qy       1937 TATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAATTTGGACA 1996
Db        1201 TGTAACTATGGGATTAGGAGGAGAAGGGTACCTAAATTTCATGGGAAATGAATTCGGCCA 1260

Qy       1997 CCCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTCC 2056
Db        1261 CCCTGAGTGGATTGATTTCCCTAGGGCTGAACAACACCTCTCTGATGGCTCAGTAATTCC 1320

Qy       2057 TGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCA 2116
Db        1321 CGGAAACCAATTCAGTTATGATAAATGCAGACGGAGATTTGACCTGGGAGATGCAGAATA 1380

Qy       2117 TCTGAGATATCAT 2129
Db        1381 TTTAAGATACCGT 1393
```

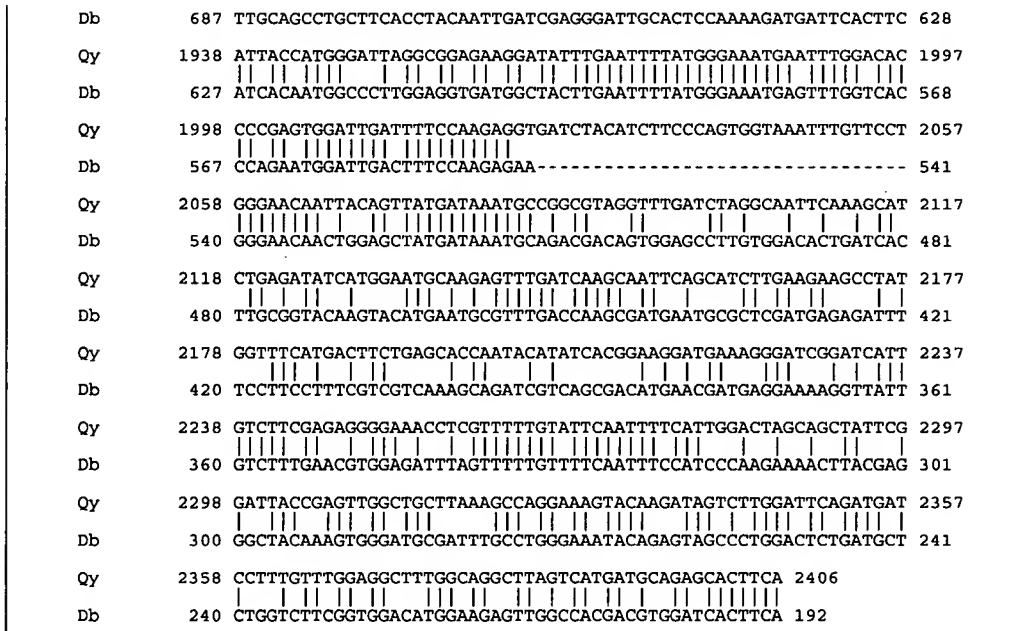
```
RESULT 11
US-09-658-499-3
; Sequence 3, Application US/09658499
; Patent No. 6469231
; GENERAL INFORMATION:
;  APPLICANT: EK, Bo
;  APPLICANT:  KHOSNOODI, Jamshid
;  APPLICANT:  LARSSON, Clas-Tomas
;  APPLICANT:  LARSSON, Hakan
;  APPLICANT:  RASK, Lars
;  TITLE OF INVENTION: STARCH BRANCHING ENZYME II OF POTATO
;  FILE REFERENCE: 003300-486
;  CURRENT APPLICATION NUMBER: US/09/658,499
;  CURRENT FILING DATE:  2000-09-08
;  PRIOR APPLICATION NUMBER: 09/087,277
;  PRIOR FILING DATE: 1998-05-29
;  PRIOR APPLICATION NUMBER: PCT/SE96/01558
;  PRIOR FILING DATE: 1996-11-28
;  PRIOR APPLICATION NUMBER: SE 9504272-7
;  PRIOR FILING DATE: 1995-11-29
;  PRIOR APPLICATION NUMBER: SE 9601506-0
;  PRIOR FILING DATE: 1996-04-19
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
;   LENGTH: 1393
;   TYPE: DNA
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism:beII gene fragment
;   OTHER INFORMATION: (branching enzyme II) from Solanum tuberosum
;   OTHER INFORMATION: (potato)
;   NAME/KEY: CDS
;   LOCATION: (2)..(1393)
;   NAME/KEY: misc_feature
;   LOCATION: (424)..(1150)
;   OTHER INFORMATION: Nucleotides 424, 891 and 1150 are n wherein n = A,
;   OTHER INFORMATION: C, G or T.
;   NAME/KEY: misc_feature
;   LOCATION: (422)..(424)
;   OTHER INFORMATION: Amino acid 141 is Xaa wherein Xaa = Thr.
;   NAME/KEY: misc_feature
;   LOCATION: (890)..(892)
;   OTHER INFORMATION: Amino acid 297 is Xaa wherein Xaa = Tyr, Ser, Cys
;   OTHER INFORMATION: or Phe.
;   NAME/KEY: misc_feature
;   LOCATION: (1148)..(1150)
;   OTHER INFORMATION: Amino acid 383 is Xaa wherein Xaa = Pro.
US-09-658-499-3

  Query Match             36.6%;  Score 947.4;  DB 4;  Length 1393;
  Best Local Similarity   79.9%;  Pred. No. 1.7e-298;
  Matches 1113;  Conservative    0;  Mismatches  280;  Indels    0;  Gaps    0;
```

```
Qy        737 TTTGCCGAATAATGCAGATGGTTCACCACCAATTCCCCATGGTTCTCGAGTAAAGATACG 796
Db          1 TCTGCCAAATAATGTGGATGGTTCTCCTGCAATTCCTCATGGGTCCAGAGTGAAGATACG 60

Qy        797 CATGGATACTCCATCTGGCAACAAAGATTCTATTCCTGCTTGGATCAAGTTCTCAGTTCA 856
Db         61 TATGGACACTCCATCAGGTGTTAAGGATTCCATTCCTGCTTGGATCAACTACTCTTTACA 120

Qy        857 AGCACCAGGTGAACTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGGAGAAGTA 916
Db        121 GCTTCCTGATGAAATTCCATATAATGGAATATATTATGATCCACCCGAAGAGGAGAGGTA 180

Qy        917 TGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGTCGCACGT 976
Db        181 TATCTTCCAACACCCACGGCCAAAGAAACCAAAGTCGCTGAGAATATATGAATCTCATAT 240

Qy        977 TGGAATGAGTAGTACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCT 1036
Db        241 TGGAATGAGTAGTCCGGAGCCTAAAATTAACTCATACGTGAATTTTAGAGATGAAGTTCT 300

Qy       1037 TCCTCGCATCAAAAAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAGAGCATTC 1096
Db        301 TCCTCGCATAAAAAAGCTTGGGTACAATGCGGTGCAAATTATGGCTATTCAAGAGCATTC 360

Qy       1097 ATATTATGCTAGTTTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCCGATTTGG 1156
Db        361 TTATTATGCTAGTTTTGGTTATCATGTCACAAATTTTTTNGCACCAAGCAGCCGTTTTGA 420

Qy       1157 AACTCCTGATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCT 1216
Db        421 AACNCCCGACGACCTTAAGTCTTTGATTGATAAAGCTCATGAGCTAGGAATTGTTGTTCT 480

Qy       1217 CATGGATATTGTTCATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATATGTTTGA 1276
Db        481 CATGGACATTGTTCACAGCCATGCATCAAATAATACTTTAGATGGACTGAACATGTTTGA 540

Qy       1277 TGGTACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGTGGGACTC 1336
Db        541 CGGCACAGATAGTTGTTACTTTCACTCTGGAGCTCGTGGTTATCATTGGATGTGGGATTC 600

Qy       1337 TCGCCTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATGCAAGGTG 1396
Db        601 CCGCCTCTTTAACTATGGAAACTGGGAGGTACTTAGGTATCTTCTCTCAAATGCGAGATG 660

Qy       1397 GTGGTTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAATGATGTA 1456
```

```
Db        661 GTGGTTGGATGAGTTCAAATTTGATGGATTTAGATTTGATGGTGTGACATCAATGATGTA 720

Qy       1457 CACCCATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTGGATATGC 1516

Db        721 TACTCACCACGGATTATCGGTGGGATTCACTGGGAACTACGAGGAATACTTTGGACTCGC 780

Qy       1517 AACTGATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATGGTCTCTT 1576

Db        781 AACTGATGTGGATGCTGTTGTGTATCTGATGCTGGTCAACGATCTTATTCATGGGCTTTT 840

Qy       1577 CCCAGAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCATTCCGGT 1636

Db        841 CCCAGATGCAATTACCATTGGTGAAGATGTTAGCGGAATGCCGACATTTTNTATTCCCGT 900

Qy       1637 TGAAGATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATAAATGGGT 1696

Db        901 TCAAGATGGGGGTGTTGGCTTTGACTATCGGCTGCATATGGCAATTGCTGATAAATGGAT 960

Qy       1697 TGAGATTATTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATATGCTGAC 1756

Db        961 TGAGTTGCTCAAGAAACGGGATGAGGATTGGAGAGTGGGTGATATTGTTCATACACTGAC 1020

Qy       1757 CAACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGGCCCTTGT 1816

Db       1021 AAATAGAAGATGGTCGGAAAAGTGTGTTTCATACGCTGAAAGTCATGATCAAGCTCTAGT 1080

Qy       1817 TGGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCATGGCTCT 1876

Db       1081 CGGTGATAAAACTATAGCATTCTGGCTGATGGACAAGGATATGTATGATTTTATGGCTCT 1140

Qy       1877 TGACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCT 1936

Db       1141 GGATAGACCNTCAACATCATTAATAGATCGTGGGATAGCATTGCACAAGATGATTAGGCT 1200

Qy       1937 TATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAATTTGGACA 1996

Db       1201 TGTAACTATGGGATTAGGAGGAGAAGGGTACCTAAATTTCATGGGAAATGAATTCGGCCA 1260

Qy       1997 CCCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTCC 2056

Db       1261 CCCTGAGTGGATTGATTTCCCTAGGGCTGAACAACACCTCTCTGATGGCTCAGTAATTCC 1320

Qy       2057 TGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCA 2116

Db       1321 CGGAAACCAATTCAGTTATGATAAATGCAGACGGAGATTTGACCTGGGAGATGCAGAATA 1380

Qy       2117 TCTGAGATATCAT 2129

Db       1381 TTTAAGATACCGT 1393


RESULT 12
US-09-731-166-13
; Sequence 13, Application US/09731166
; Patent No. 6639126
; GENERAL INFORMATION:
;  APPLICANT:  Sewalt, Vincent J. H.
;  APPLICANT:  Singletary, George W.
;  TITLE OF INVENTION:  Production of Modified Polysaccarides
;  FILE REFERENCE:  35718/206348
;  CURRENT APPLICATION NUMBER: US/09/731,166
;  CURRENT FILING DATE:  2000-12-06
;  PRIOR APPLICATION NUMBER:  60/169,993
;  PRIOR FILING DATE:  1999-12-06
;  NUMBER OF SEQ ID NOS:  16
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 2470
;   TYPE: DNA
;   ORGANISM: Zea mays
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: SBEI -- Genbank Accession No. 6639126 217959
;   NAME/KEY: CDS
;   LOCATION: (2)...(2470)
US-09-731-166-13

  Query Match             24.5%;  Score 633.4;  DB 4;  Length 2470;
  Best Local Similarity   59.9%;  Pred. No. 8.3e-196;
  Matches 1179;  Conservative    0;  Mismatches  736;  Indels   54;  Gaps    5;

Qy        456 ATATATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCA 515

Db        251 ATATACGACCTGGACCCCAAGCTGGAGATATTCAAGGACCATTTCAGGTACCGGATGAAA 310

Qy        516 CAGTACAAAAGACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCT 575

Db        311 AGATTCCTAGAGCAGAAAGGATCAATTGAAGAAAATGAGGGAAGTCTTGAATCTTTTTCT 370

Qy        576 CGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGG 635

Db        371 AAAGGCTATTTGAAATTTGGGATTAATACAAATGAGGATGGAACTGTATATCGTGAATGG 430

Qy        636 GCACCAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCA 695

Db        431 GCACCTGCTGCGCAGGAGGCAGAGCTTATTGGTGACTTCAATGACTGGAATGGTGCAAAC 490

Qy        696 GATGTCATGACTCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGAT 755

Db        491 CATAAGATGGAGAAGGATAAATTTGGTGTTTGGTCGATCAAAAT---TGACCATGTCAAA 547

Qy        756 GGTTCACCACCAATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGC 815

Db        548 GGGAAACCTGCCATCCCTCACAATTCCAAGGTTAAATTTCGCTTTCTACATGGTGGAGTA 607

Qy        816 AACAAAGATTCTATTCCTGCTTGGATCAAGTTCTC------AGTTCAAGCACCAGGTGAA 869

Db        608 TGGGTTGATCGTATTCCAGCATTGATTCGTTATGCGACTGTTGATGCCTCTAAATTTGGA 667

Qy        870 CTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAAT 929

Db        668 GCTCCCTATGATGGTGTTCATTGGGATCCTCCTGCTTCTGAAAGGTACACATTTAAGCAT 727

Qy        930 CCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGT 989

Db        728 CCTCGGCCTTCAAAGCCTGCTGCTCCACGTATCTATGAAGCCCATGTAGGTATGAGTGGT 787

Qy        990 ACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAA 1049

Db        788 GAAAAGCCAGCAGTAAGCACATATAGGGAATTTGCAGACAATGTGTTGCCACGCATACGA 847

Qy       1050 AAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGT 1109

Db        848 GCAAATAACTACAACACAGTTCAGTTGATGGCAGTTATGGAGCATTCGTACTATGCTTCT 907

Qy       1110 TTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGAT 1169

Db        908 TTCGGGTACCATGTGACAAATTTCTTTGCGGTTAGCAGCAGATCAGGCACACCAGAGGAC 967

Qy       1170 TTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTT 1229

Db        968 CTCAAATATCTTGTTGATAAGGCACACAGTTTGGGTTTGCGAGTTCTGATGGATGTTGTC 1027

Qy       1230 CATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATATGTTTGATG---------GT 1280

Db       1028 CATAGCCATGCAAGTAATAATGTCACAGATGGTTTAAATGGCTATGATGTTGGACAAAGC 1087

Qy       1281 ACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGTGGGACTCTCGC 1340

Db       1088 ACCCAAGAGTCCTATTTTCATGCGGGAGATAGAGGTTATCATAAACTTTGGGATAGTCGG 1147

Qy       1341 CTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGG 1400

Db       1148 CTGTTCAACTATGCTAACTGGGAGGTATTAAGGTTTCTTCTTTCTAACCTGAGATATTGG 1207
```

```
Qy       1401 TTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAATGATGTACACC 1460
Db       1208 TTGGATGAATTCATGTTTGATGGCTTCCGATTTGATGGAGTTACATCAATGCTGTATCAT 1267

Qy       1461 CATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTGGATATGCAACT 1520
Db       1268 CACCATGGTATCAATGTGGGGTTTACTGGAAACTACCAGGAATATTTCAGTTTGGACACA 1327

Qy       1521 GATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATGGTCTCTTCCCA 1580
Db       1328 GCTGTGGATGCAGTTGTTTACATGATGCTTGCAAACCATTTAATGCACAAACTCTTGCCA 1387

Qy       1581 GAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCATTCCGGTTGAA 1640
Db       1388 GAAGCAACTGTTGTTGCTGAAGATGTTTCAGGCATGCCGGTCCTTTGCCGGCCAGTTGAT 1447

Qy       1641 GATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATAAATGGGTTGAG 1700
Db       1448 GAAGGTGGGGTTGGGTTTGACTATCGCCTGGCAATGGCTATCCCTGATAGATGGATTGAC 1507

Qy       1701 ATTATTCAGAAGAGAGATGA---AGATTGGAAAATGGGTGACATTGTACATATGCTGACC 1757
Db       1508 TACCTGAAGAATAAAGATGACTCTGAGTGGTCGATGGGTGAAATAGCGCATACTTTGACT 1567

Qy       1758 AACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGGCCCTTGTT 1817
Db       1568 AACAGGAGATATACTGAAAAATGCATCGCATATGCTGAGAGCCATGATCAGTCTATTGTT 1627

Qy       1818 GGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCATGGCTCTT 1877
Db       1628 GGCGACAAAACTATTGCATTTCTCCTGATGGACAAGGAAATGTACACTGGCATGTCAGAC 1687

Qy       1878 GACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCTT 1937
Db       1688 TTGCAGCCTGCTTCACCTACAATTGATCGAGGGATTGCACTCCAAAAGATGATTCACTTC 1747

Qy       1938 ATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAATTTGGACAC 1997
Db       1748 ATCACAATGGCCCTTGGAGGTGATGGCTACTTGAATTTTATGGGAAATGAGTTTGGTCAC 1807

Qy       1998 CCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTCCT 2057
Db       1808 CCAGAATGGATTGACTTTCCAAGAGAA---------------------------------- 1834

Qy       2058 GGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCAT 2117
Db       1835 GGGAACAACTGGAGCTATGATAAATGCAGACGACAGTGGAGCCTTGTGGACACTGATCAC 1894

Qy       2118 CTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTAT 2177
Db       1895 TTGCGGTACAAGTACATGAATGCGTTTGACCAAGCGATGAATGCGCTCGATGAGAGATTT 1954

Qy       2178 GGTTTCATGACTTCTGAGCACCAATACATATCACGGAAGGATGAAAGGGATCGGATCATT 2237
Db       1955 TCCTTCCTTTCGTCGTCAAAGCAGATCGTCAGCGACATGAACGATGAGGAAAAGGTTATT 2014

Qy       2238 GTCTTCGAGAGGGGAAACCTCGTTTTTGTATTCAATTTTCATTGGACTAGCAGCTATTCG 2297
Db       2015 GTCTTTGAACGTGGAGATTTAGTTTTGTTTTCAATTTCCATCCCAAGAAAACTTACGAG 2074

Qy       2298 GATTACCGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAGATAGTCTTGGATTCAGATGAT 2357
Db       2075 GGCTACAAAGTGGGATGCGATTTGCCTGGGAAATACAGAGTAGCCCTGGACTCTGATGCT 2134

Qy       2358 CCTTTGTTTGGAGGCTTTGGCAGGCTTAGTCATGATGCAGAGCACTTCA 2406
Db       2135 CTGGTCTTCGGTGGACATGGAAGAGTTGGCCACGACGTGGATCACTTCA 2183


RESULT 13
US-09-257-894-19/c
; Sequence 19, Application US/09257894
; Patent No. 6376749
;  GENERAL INFORMATION:
;    APPLICANT:  Broglie, Karen E.
;    APPLICANT:  Klein, Theodore M.
;    APPLICANT:  Hubbard, Natalie L.
;    APPLICANT:  Lightner, Jonathan E.
;    TITLE OF INVENTION:  No. 6376749el Starches via Modification of
;    TITLE OF INVENTION:  Expression of Starch Biosynthesis
;    TITLE OF INVENTION:  Enzyme Genes
;    NUMBER OF SEQUENCES:  25
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  E. I. du Pont de Nemours and Company
;      STREET:  1007 Market Street
;      CITY:  Wilmington
;      STATE:  Delaware
;      COUNTRY:  USA
;      ZIP:  19898
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  Microsoft Windows 95
;      SOFTWARE:  Version 7.0A
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/257,894
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  09/091,052
;      FILING DATE:  JUNE 10, 1998
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Majarian, William R.
;      REGISTRATION NUMBER:  41,173
;      REFERENCE/DOCKET NUMBER:  BB-1066-A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  302-992-4926
;      TELEFAX:  302-773-0164
;  INFORMATION FOR SEQ ID NO:  19:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2487 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-09-257-894-19

  Query Match             24.5%;  Score 633.4;  DB 4;  Length 2487;
  Best Local Similarity   59.9%;  Pred. No. 8.4e-196;
  Matches 1179;  Conservative    0;  Mismatches  736;  Indels   54;  Gaps    5;

Qy        456 ATATATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCA 515
Db       2124 ATATACGACCTGGACCCCAAGCTGGAGATATTCAAGGACCATTTCAGGTACCGGATGAAA 2065

Qy        516 CAGTACAAAAGACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCT 575
Db       2064 AGATTCCTAGAGCAGAAAGGATCAATTGAAGAAAATGAGGGAAGTCTTGAATCTTTTTCT 2005

Qy        576 CGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGG 635
Db       2004 AAAGGCTATTTGAAATTTGGGATTAATACAAATGAGGATGGAACTGTATATCGTGAATGG 1945

Qy        636 GCACCAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCA 695
Db       1944 GCACCTGCTGCGCAGGAGGCAGAGCTTATTGGTGACTTCAATGACTGGAATGGTGCAAAC 1885

Qy        696 GATGTCATGACTCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGAT 755
Db       1884 CATAAGATGGAGAAGGATAAATTTGGTGTTTGGTCGATCAAAAT---TGACCATGTCAAA 1828

Qy        756 GGTTCACCACCAATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGC 815
Db       1827 GGGAAACCTGCCATCCCTCACAATTCCAAGGTTAAATTTCGCTTTCTACATGGTGGAGTA 1768

Qy        816 AACAAAGATTCTATTCCTGCTTGGATCAAGTTCTC------AGTTCAAGCACCAGGTGAA 869
```

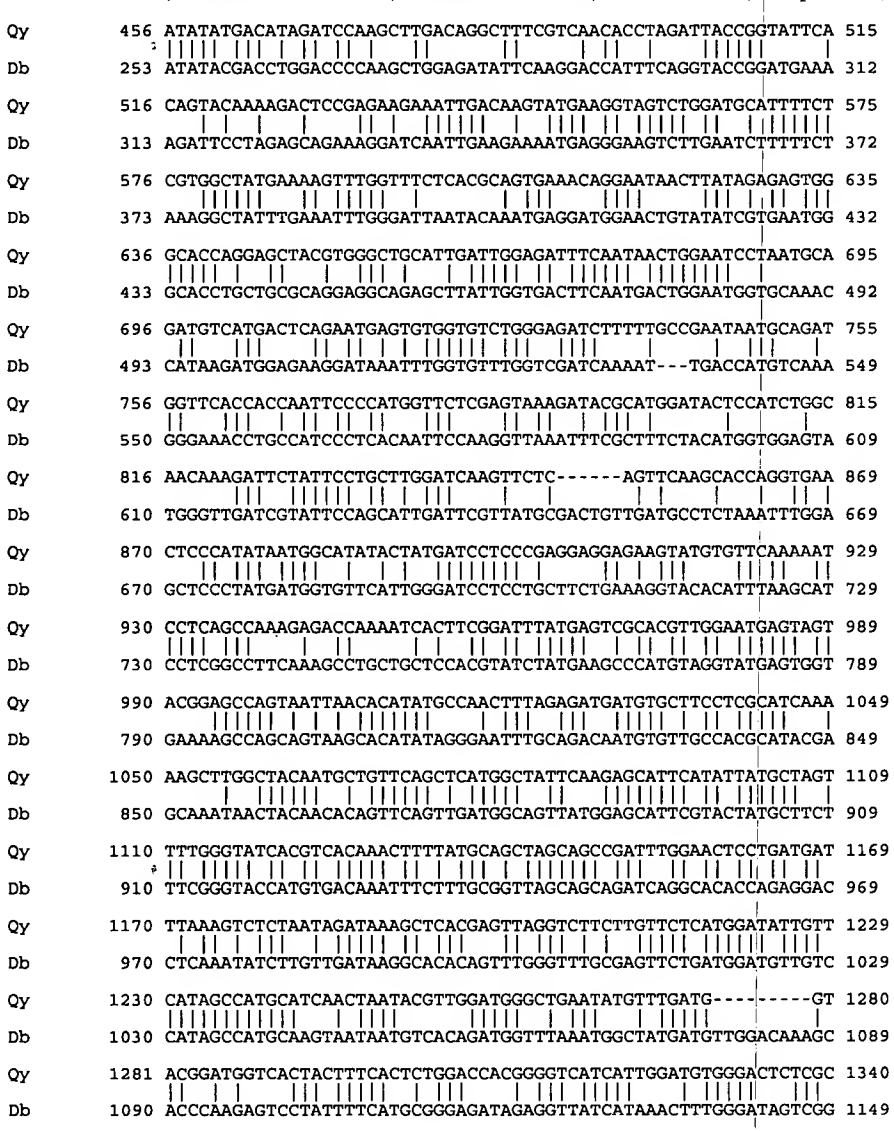


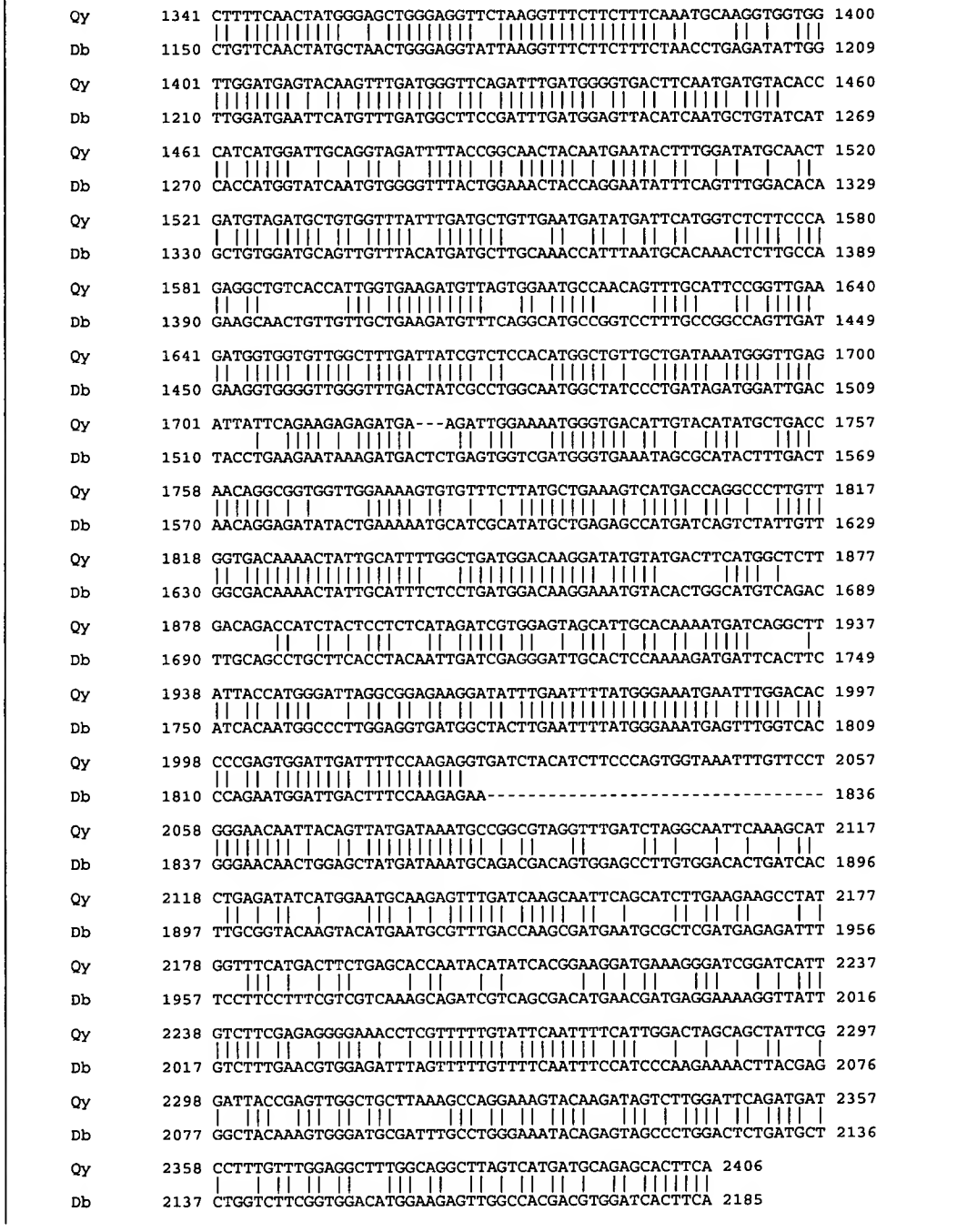


RESULT 14
US-09-257-894-24
; Sequence 24, Application US/09257894
; Patent No. 6376749
; GENERAL INFORMATION:
; APPLICANT: Broglie, Karen E.
; APPLICANT: Klein, Theodore M.
; APPLICANT: Hubbard, Natalie L.
; APPLICANT: Lightner, Jonathan E.
; TITLE OF INVENTION: No. 6376749el Starches via Modification of
; TITLE OF INVENTION: Expression of Starch Biosynthesis
; TITLE OF INVENTION: Enzyme Genes
; NUMBER OF SEQUENCES: 25
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E. I. du Pont de Nemours and Company
; STREET: 1007 Market Street
; CITY: Wilmington
; STATE: Delaware
; COUNTRY: USA
; ZIP: 19898
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: Microsoft Windows 95
; SOFTWARE: Version 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/257,894
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/091,052
; FILING DATE: JUNE 10, 1998
; ATTORNEY/AGENT INFORMATION:
; NAME: Majarian, William R.
; REGISTRATION NUMBER: 41,173
; REFERENCE/DOCKET NUMBER: BB-1066-A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-992-4926

; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 24:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2565 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
US-09-257-894-24

Query Match 24.5%; Score 633.4; DB 4; Length 2565;
Best Local Similarity 59.9%; Pred. No. 8.5e-196;
Matches 1179; Conservative 0; Mismatches 736; Indels 54; Gaps 5;





```
RESULT 15
US-08-941-445A-16
; Sequence 16, Application US/08941445A
; Patent No. 6107060
;  GENERAL INFORMATION:
;    APPLICANT:  Keeling, Peter
;    APPLICANT:  Guan, Hanping
;    TITLE OF INVENTION:  Starch Encapsulation
;    NUMBER OF SEQUENCES:  37
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Greenlee, Winner and Sullivan, P.C.
;      STREET:  5370 Manhattan Circle
;      CITY:  Boulder
;      STATE:  CO
;      COUNTRY:  US
;      ZIP:  80303
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/941,445A
;      FILING DATE:  30-SEP-1997
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/026,855
;      FILING DATE:  30-SEP-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Winner, Ellen P
;      REGISTRATION NUMBER:  28,547
;      REFERENCE/DOCKET NUMBER:  89-97
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 499-8080
;      TELEFAX:  (303) 499-8089
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2763 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  not relevant
;    MOLECULE TYPE:  mRNA
;    HYPOTHETICAL:  NO
;    ORIGINAL SOURCE:
;      ORGANISM:  Zea mays
;    FEATURE:
;      NAME/KEY:  transit_peptide
;      LOCATION:  2..190
;    FEATURE:
;      NAME/KEY:  mat_peptide
;      LOCATION:  191..2467
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  2..2470
US-08-941-445A-16

  Query Match             24.5%;  Score 633.4;  DB 3;  Length 2763;
  Best Local Similarity   59.9%;  Pred. No. 9e-196;
  Matches 1179;  Conservative    0;  Mismatches  736;  Indels   54;  Gaps    5;

Qy        456 ATATATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTCA 515
              ||||| ||| | || || |   ||       ||      | ||: |     ||||||     |
Db        251 ATATACGACCTGGACCCCAAGCTGGAGATATTCAAGGACCATTTCAGGTACCGGATGAAA 310

Qy        516 CAGTACAAAAGACTCCGAGAAGAAATTGACAAGTATGAAGGTAGTCTGGATGCATTTTCT 575
              | |  |   |    || |  ||||||  |  |||| ||||||| ||  | ||||||
Db        311 AGATTCCTAGAGCAGAAAGGATCAATTGAAGAAAATGAGGGAAGTCTTGAATCTTTTTCT 370

Qy        576 CGTGGCTATGAAAAGTTTGGTTTCTCACGCAGTGAAACAGGAATAACTTATAGAGAGTGG 635
              ||||||   || |||||  |       | |||    ||||     ||| | || |||
Db        371 AAAGGCTATTTGAAATTTGGGATTAATACAAATGAGGATGGAACTGTATATCGTGAATGG 430

Qy        636 GCACCAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGCA 695
              ||||| |  ||    |  ||| |   | ||||| || |||||| ||||||| |
Db        431 GCACCTGCTGCGCAGGAGGCAGAGCTTATTGGTGACTTCAATGACTGGAATGGTGCAAAC 490

Qy        696 GATGTCATGACTCAGAATGAGTGTGGTGTCTGGGAGATCTTTTTGCCGAATAATGCAGAT 755
              ||   |||    || || | | |||||| ||| ||||    |     |  |||   |
Db        491 CATAAGATGGAGAAGGATAAATTTGGTGTTTGGTCGATCAAAAT---TGACCATGTCAAA 547

Qy        756 GGTTCACCACCAATTCCCCATGGTTCTCGAGTAAAGATACGCATGGATACTCCATCTGGC 815
              ||  |||  | || || ||   |||    || ||  | ||| |       |      |
Db        548 GGGAAACCTGCCATCCCTCACAATTCCAAGGTTAAATTTCGCTTTCTACATGGTGGAGTA 607

Qy        816 AACAAAGATTCTATTCCTGCTTGGATCAAGTTCTC------AGTTCAAGCACCAGGTGAA 869
                  |||  |||||| || | |||    |   |       | |   |   |  || | |
Db        608 TGGGTTGATCGTATTCCAGCATTGATTCGTTATGCGACTGTTGATGCCTCTAAATTTGGA 667

Qy        870 CTCCCATATAATGGCATATACTATGATCCTCCCGAGGAGGAGAAGTATGTGTTCAAAAAT 929
              || ||| ||||  |  | |  |||||||| |      || | |||    || ||  ||
Db        668 GCTCCCTATGATGGTGTTCATTGGGATCCTCCTGCTTCTGAAAGGTACACATTTAAGCAT 727

Qy        930 CCTCAGCCAAAGAGACCAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGT 989
              ||||  |||   |  ||     | |  || || ||||  | || || || |||||  ||
Db        728 CCTCGGCCTTCAAAGCCTGCTGCTCCACGTATCTATGAAGCCCATGTAGGTATGAGTGGT 787

Qy        990 ACGGAGCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAA 1049
                  ||||||  | |  | |||||||     | |||  |||  |||||  | ||  |||||   |
Db        788 GAAAAGCCAGCAGTAAGCACATATAGGGAATTTGCAGACAATGTGTTGCCACGCATACGA 847

Qy       1050 AAGCTTGGCTACAATGCTGTTCAGCTCATGGCTATTCAAGAGCATTCATATTATGCTAGT 1109
                |  ||||||  | ||||||  | |||||  ||   ||||||||  || ||||||  |
Db        848 GCAAATAACTACAACACAGTTCAGTTGATGGCAGTTATGGAGCATTCGTACTATGCTTCT 907

Qy       1110 TTTGGGTATCACGTCACAAACTTTTATGCAGCTAGCAGCCGATTTGGAACTCCTGATGAT 1169
              || ||||| || || |||||  || | |||  | |||||||  |||  ||  ||  ||  ||
Db        908 TTCGGGTACCATGTGACAAATTTCTTTGCGGTTAGCAGCAGATCAGGCACACCAGAGGAC 967

Qy       1170 TTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTT 1229
              | || | |||  | |||||  || |||    || ||| | |  |||||  ||||||  ||||
Db        968 CTCAAATATCTTGTTGATAAGGCACACAGTTTGGGTTTGCGAGTTCTGATGGATGTTGTC 1027

Qy       1230 CATAGCCATGCATCAACTAATACGTTGGATGGGCTGAATATGTTTGATG---------GT 1280
              ||||||||||||    | ||||       |||||  | |||   | |||||         |
Db       1028 CATAGCCATGCAAGTAATAATGTCACAGATGGTTTAAATGGCTATGATGTTGGACAAAGC 1087

Qy       1281 ACGGATGGTCACTACTTTCACTCTGGACCACGGGGTCATCATTGGATGTGGGACTCTCGC 1340
              ||  | |    ||| |||||  | |||     | ||| |||||     | |||||   |||
Db       1088 ACCCAAGAGTCCTATTTTCATGCGGGAGATAGAGGTTATCATAAACTTTGGGATAGTCGG 1147

Qy       1341 CTTTTCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTCTTTCAAATGCAAGGTGGTGG 1400
              || ||||||||||  | |||||||||  ||||||||||||||||||  ||    || |  |||
Db       1148 CTGTTCAACTATGCTAACTGGGAGGTATTAAGGTTTCTTCTTTCTAACCTGAGATATTGG 1207

Qy       1401 TTGGATGAGTACAAGTTTGATGGGTTCAGATTTGATGGGGTGACTTCAATGATGTACACC 1460
              ||||||| | || |||||||||  ||| ||||||||||  || || ||||||  ||||
Db       1208 TTGGATGAATTCATGTTTGATGGCTTCCGATTTGATGGAGTTACATCAATGCTGTATCAT 1267

Qy       1461 CATCATGGATTGCAGGTAGATTTTACCGGCAACTACAATGAATACTTTGGATATGCAACT 1520
              || |||||  |  | || |  |||||  || ||||||  | |||||  ||  |  |  |  ||
Db       1268 CACCATGGTATCAATGTGGGGTTTACTGGAAACTACCAGGAATATTTCAGTTTGGACACA 1327

Qy       1521 GATGTAGATGCTGTGGTTTATTTGATGCTGTTGAATGATATGATTCATGGTCTCTTCCCA 1580
              | |||  |||||  || |||||  |||||||     ||  || |  || ||  |||||  |||
Db       1328 GCTGTGGATGCAGTTGTTTACATGATGCTTGCAAACCATTTAATGCACAAACTCTTGCCA 1387

Qy       1581 GAGGCTGTCACCATTGGTGAAGATGTTAGTGGAATGCCAACAGTTTGCATTCCGGTTGAA 1640
              || ||        ||| ||||||||||    || |||||      |||||   || |||||
Db       1388 GAAGCAACTGTTGTTGCTGAAGATGTTTCAGGCATGCCGGTCCTTTGCCGGCCAGTTGAT 1447

Qy       1641 GATGGTGGTGTTGGCTTTGATTATCGTCTCCACATGGCTGTTGCTGATAAATGGGTTGAG 1700
              || ||||| ||||| ||||| ||||| ||     ||||||  |  ||||||  |||| ||||
Db       1448 GAAGGTGGGGTTGGGTTTGACTATCGCCTGGCAATGGCTATCCCTGATAGATGGATTGAC 1507

Qy       1701 ATTATTCAGAAGAGAGATGA---AGATTGGAAAATGGGTGACATTGTACATATGCTGACC 1757
```

```
Db       1508 TACCTGAAGAATAAAGATGACTCTGAGTGGTCGATGGGTGAAATAGCGCATACTTTGACT 1567

Qy       1758 AACAGGCGGTGGTTGGAAAAGTGTGTTTCTTATGCTGAAAGTCATGACCAGGCCCTTGTT 1817

Db       1568 AACAGGAGATATACTGAAAAATGCATCGCATATGCTGAGAGCCATGATCAGTCTATTGTT 1627

Qy       1818 GGTGACAAAACTATTGCATTTTGGCTGATGGACAAGGATATGTATGACTTCATGGCTCTT 1877

Db       1628 GGCGACAAAACTATTGCATTTCTCCTGATGGACAAGGAAATGTACACTGGCATGTCAGAC 1687

Qy       1878 GACAGACCATCTACTCCTCTCATAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCTT 1937

Db       1688 TTGCAGCCTGCTTCACCTACAATTGATCGAGGGATTGCACTCCAAAAGATGATTCACTTC 1747

Qy       1938 ATTACCATGGGATTAGGCGGAGAAGGATATTTGAATTTTATGGGAAATGAATTTGGACAC 1997

Db       1748 ATCACAATGGCCCTTGGAGGTGATGGCTACTTGAATTTTATGGGAAATGAGTTTGGTCAC 1807

Qy       1998 CCCGAGTGGATTGATTTTCCAAGAGGTGATCTACATCTTCCCAGTGGTAAATTTGTTCCT 2057

Db       1808 CCAGAATGGATTGACTTTCCAAGAGAA------------------------------ 1834

Qy       2058 GGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCAT 2117

Db       1835 GGGAACAACTGGAGCTATGATAAATGCAGACGACAGTGGAGCCTTGTGGACACTGATCAC 1894

Qy       2118 CTGAGATATCATGGAATGCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTAT 2177

Db       1895 TTGCGGTACAAGTACATGAATGCGTTTGACCAAGCGATGAATGCGCTCGATGAGAGATTT 1954

Qy       2178 GGTTTCATGACTTCTGAGCACCAATACATATCACGGAAGGATGAAAGGGATCGGATCATT 2237

Db       1955 TCCTTCCTTTCGTCGTCAAAGCAGATCGTCAGCGACATGAACGATGAGGAAAAGGTTATT 2014

Qy       2238 GTCTTCGAGAGGGGAAACCTCGTTTTTGTATTCAATTTTCATTGGACTAGCAGCTATTCG 2297

Db       2015 GTCTTTGAACGTGGAGATTTAGTTTTTGTTTTCAATTTCCATCCCAAGAAAACTTACGAG 2074

Qy       2298 GATTACCGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAGATAGTCTTGGATTCAGATGAT 2357

Db       2075 GGCTACAAAGTGGGATGCGATTTGCCTGGGAAATACAGAGTAGCCCTGGACTCTGATGCT 2134

Qy       2358 CCTTTGTTTGGAGGCTTTGGCAGGCTTAGTCATGATGCAGAGCACTTCA 2406

Db       2135 CTGGTCTTCGGTGGACATGGAAGAGTTGGCCACGACGTGGATCACTTCA 2183
```

Search completed: July 16, 2004, 19:54:58
Job time : 197 secs